TENNESSEE VALLEY AUTHORITY

Multiple Reservoir Land Management Plans

DRAFT
ENVIRONMENTAL IMPACT STATEMENT
Volume I

Chickamauga Reservoir - Fort Loudoun Reservoir - Great Falls Reservoir
Kentucky Reservoir - Nickajack Reservoir - Normandy Reservoir
Wheeler Reservoir - Wilson Reservoir

December 2016

TVA

This page left blank intentionally

Document Type: EIS Administrative Record
Index Field: Draft EIS
Project Name: Multiple RLMPs and CVLP EIS
Project Number: 2016-2

MULTIPLE RESERVOIR LAND MANAGEMENT PLANS
DRAFT ENVIRONMENTAL IMPACT STATEMENT
Alabama, Kentucky and Tennessee

VOLUME I

December 2016

Contact:
Matthew Higdon
NEPA Project Manager
Tennessee Valley Authority
400 W. Summit Hill Drive, WT11D
Knoxville, Tennessee 37902
Phone: 865.632.8051
landplans@tva.gov

This page intentionally left blank

COVER SHEET

Multiple Reservoir Land Management Plans

Proposed action: The Tennessee Valley Authority (TVA) has prepared this draft Environmental Impact Statement (EIS) to assess the impacts and address environmental, safety, and socioeconomic concerns associated with the implementation of reservoir land management plans (RLMPs) for public lands surrounding eight reservoirs located in Alabama, Kentucky, and Tennessee. TVA will decide which of two alternatives will be used to manage TVA public lands surrounding these reservoirs.

Type of document: Draft Environmental Impact Statement

Lead agency: Tennessee Valley Authority

Contact:
Matthew Higdon
Tennessee Valley Authority
400 W. Summit Hill Drive, WT 11D-K
Knoxville, TN 37902
Phone: (865) 632-8051
E-Mail: landplans@tva.gov

Comments due date: Comments may be submitted online www.tva.gov/nepa or sent to Mr. Higdon at the above mailing or email address. Comments must be submitted by January 31, 2017.

Abstract:

TVA develops reservoir land management plans (RLMPs) to facilitate the management of reservoir lands in its custody pursuant to the TVA Act of 1933. TVA proposes to develop RLMPs for public lands surrounding the eight reservoirs located in Alabama (Wheeler and Wilson Reservoirs), Kentucky (Kentucky Reservoir), and Tennessee (Chickamauga, Fort Loudoun, Great Falls, Kentucky, Nickajack and Normandy Reservoirs). All lands under TVA management on these eight reservoirs, a total of approximately 138,300 acres, are under consideration in this planning process. The eight RLMPs would be used to guide land use approvals, private water use facility permitting, and resource management decisions on TVA-managed public land around these facilities. TVA developed two alternatives to be evaluated in this EIS: Alternative A – No Action Alternative and Alternative B – Proposed Land Use Plan Alternative.

Alternative B is the preferred alternative and provides advantages relative to Alternative A as it establishes a planning framework for RLMPs that brings consistency to the land planning process across the eight reservoirs. Alternative B also applies a systematic method of evaluating and identifying the most suitable uses of TVA public lands in furtherance of TVA's responsibilities under the TVA Act. Under the preferred alternative, the proposed RLMPs would guide land use approvals, private water use facility permitting, and resource management decisions on the eight reservoirs.

This page intentionally left blank

SUMMARY

Introduction

The Tennessee Valley Authority (TVA) manages its lands to protect the integrated operation of the TVA reservoir and power systems to provide for appropriate public use and enjoyment of the reservoir system, and to provide for continuing economic growth in the Tennessee Valley. As part of the implementation of these goals, TVA proposes to develop reservoir land management plans (RLMP) for eight reservoirs located in Alabama, Kentucky and Tennessee. The eight RLMPs would include all public lands under TVA stewardship around the following reservoirs: Chickamauga, Fort Loudoun, Great Falls, Kentucky, Nickajack, Normandy, Wheeler, and Wilson, a total of approximately 138,300 acres. Six of the eight reservoirs were planned under TVA's old Forecast System or Multiple Use Tract Allocation methodologies. TVA transitioned to a Single Use Parcel methodology in 1999. TVA has never developed a RLMP for Great Falls Reservoir, and only a portion of Wilson Reservoir has been planned. Under the proposed eight RLMPs, land would be allocated into broad categories or "zones" including Zone 2 (Project Operations), Zone 3 (Sensitive Resource Management), Zone 4 (Natural Resource Conservation), Zone 5 (Industrial), Zone 6 (Developed Recreation) and Zone 7 (Shoreline Access)[1]. Land use allocations to each of these zones would be determined with consideration of the social, economic, and environmental conditions around the reservoirs.

The eight proposed RLMPs are contained within nine volumes. Volume I is the environmental impact statement which addresses the potential environmental impacts of implementing the eight RLMPs. The eight individual RLMPs are found in Volumes II through IX. The proposed RLMPs contain detailed descriptions of the environment around each reservoir and descriptions of each parcel of land addressed in the plans, as well as their proposed use.

Purpose and Need for Action

The purpose of TVA's RLMP planning process is to apply a systematic method of evaluating and identifying the most suitable uses of TVA public lands in furtherance of TVA's responsibilities under the TVA Act. The planning process uses resource data, staff expertise, stakeholder input, and suitability and capability analyses. The RLMP planning process also supports compliance with applicable state and federal regulations and executive orders, and helps ensure the protection of significant resources, including threatened and endangered species, cultural resources, wetlands, unique habitats, natural areas, water quality, and the visual character of the reservoirs. Land use allocations proposed in the eight RLMPs would also be used to update the allocation ranges in the 2011 Comprehensive Valleywide Land Plan (CVLP).

In November 2006, the TVA Board of Directors approved the TVA Land Policy to govern the retention, disposal, and planning of interests in real property. This policy provides for the continued development of RLMPs for reservoir properties with substantial public input and with approval of the TVA Board of Directors. Up-to-date RLMPs are needed to make land planning allocations on reservoirs consistent with the TVA Land Policy and the CVLP and to incorporate TVA's goals for managing natural resources on public lands.

[1] Shoreland that TVA does now own in fee is categorized as Zone 1 (Non-TVA Shoreland). Because TVA does not own or manage these lands, they are not addressed in the RLMP.

TVA's natural resources management strategy promotes the implementation of sustainable, cost-effective practices to balance protection and enhancement of ecological and cultural resources with providing multiple uses of the public lands. Through this approach, TVA ensures that resource stewardship issues and stakeholder interests are considered and conflicts are minimized. Resource management is based on cooperation, communication, coordination, and consideration of stakeholders potentially affected by resource management. TVA recognizes that the management or use of one resource affects the management or use of others; therefore, an integrated approach through the planning process is more effective than considering resources individually.

Alternatives Including the Proposed Action

TVA is considering two alternatives for managing public land under its control around the eight reservoirs. Under the No Action Alternative, TVA would continue to use the previous land use plans, if any, which use an older method of land use planning. Under Alternative B – Proposed Land Use Plan Alternative, TVA would apply the system of land allocation zones that was used in more recent TVA land plans and is consistent with current TVA policies.

Regardless of the alternative selected, the following conditions would apply:

- Any proposed development or activity on public land will be subject to TVA approval pending the completion of a site-specific environmental review to evaluate the potential environmental effects of the proposal. As necessary, TVA would impose any necessary mitigative measures as conditions of approval for the use of public lands to minimize adverse environmental effects.
- Future activities and land uses will be guided by the TVA Act and TVA's Land Policy, Shoreline Management Policy, Natural Resource Plan and CVLP.
- TVA land use allocations are not intended to supersede deeded land rights or land ownership.

Alternative A – No Action Alternative. Under the No Action Alternative, TVA would not take any action to align or complete RLMPs on the TVA managed lands on the eight reservoirs. In the case of the six reservoirs for which RLMPs were previously completed, parcels would continue to be managed in accordance with their existing plan and would continue to be based on different planning methodologies with differing allocations. Great Falls and Wilson reservoirs would continue to be unplanned and current uses of these reservoir parcels would continue. Under this alternative, TVA would not comply with the TVA Board's directive to bring its CVLP allocations up-to-date to reflect the allocations determined under the Single Use Parcel Allocation methodology, and complete alignment with existing policies would not occur.

Proposed land use requests received from external applicants or internal TVA organizations would be evaluated for consistency with the existing land use agreements, TVA policies, and/or the Forecast System or Multiple Use Tract Allocation methodologies, which may not incorporate current data on land conditions, adjacent uses, or other resources. If the request were not consistent with the previously planned land use, formal approval by the TVA Board or its designee, following appropriate review, would be required to change the land use designation.

To facilitate the comparison of alternatives, the existing land use designations for the reservoirs have been converted to the equivalent designation of one of the seven proposed land use zones. The amount of land equivalently allocated under Alternative A is shown on Table S-1.

Alternative B – Proposed Land Use Alternative. Under Alternative B, TVA would implement the RLMPs for each of the eight reservoirs presented in Volumes II through IX. Proposed parcel allocations would be developed to identify land use zones in broad categories. The plans are based on current land usage, existing land rights (i.e., committed lands), public needs, the presence of sensitive resources, and TVA policies. Land currently committed to a specific use would be allocated to that current use unless there is an overriding need to change the use. Proposed allocations are shown on Table S-1.

Table S-1. Proposed Land Allocations for Alternatives A and B

Zone	Alternative A		Alternative B	
	Acres	Percent	Acres	Percent
0[1]	69.4	<0.1	0.0	0
2	9,204.6	6.7	10,826.5	7.8
3	15,579.6	11.3	13,289.9	9.6
4	96,991.0	70.2	93,690.5	67.7
5	2,037.7	1.5	3,341.0	2.4
6	8,064.9	5.8	9,708.8	7.0
7	6,374.3	4.6	7,464.5	5.4
Total	**138,321.4**		**138,321.2**	

[1] Parcels or portions of parcels that were not previously planned.

Note: Percentages do not add to 100 due to rounding.

Land allocations under Alternative B were primarily proposed to reflect existing conditions and identify suitable uses of land utilizing resource data, stakeholder input, suitability and capability analyses, and TVA staff input, and as such the difference between the two alternatives is minor. The total number of acres of TVA lands around the eight reservoirs allocated to Zones 3 and 4 is slightly lower under Alternative B; there would be a reduction of 2,289.8 acres in Zone 3 (Sensitive Resource Management) and 3,300.3 acres in Zone 4 (Natural Resource Conservation). In turn, the amount of land allocated to Zones 2, 5, 6 and 7 (Project Operations, Industrial, Developed Recreation and Shoreline Access, respectively) would be slightly higher under Alternative B; an additional 1,622.1 acres would be allocated to Zone 2 (Project Operations), 1,303.3 acres in Zone 5 (Industrial), 1,644.0 acres in Zone 6 (Developed Recreation), and 1,090.1 acres in Zone 7 (Shoreline Access).

The primary management decisions proposed in the eight RLMPs are summarized in Table S-2.

Table S-2. Summary of Management Decisions by RLMP - Alternative B

Reservoir (Acres of TVA Land)	Summary of Major RLMP Decisions
Chickamauga (16,061.4 acres)	As detailed in Volume II of the EIS, TVA proposes substantive changes to numerous parcels of land currently allocated as Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation). Fewer Zone 3 (Sensitive Resource Management) parcels would be allocated because new information about the presence/absence of sensitive resources. As a result, more parcels would be allocated for Zone 4 (Natural Resource Conservation) and Zone 6 (Developed Recreation). In addition, minor changes to Zone 2 (Project Operations), Zone 5 (Industrial) and Zone 7 (Shoreline Access) are proposed. The proposed RLMP would replace TVA's Chickamauga RLMP, developed in 1989 under the Multiple Use Tract Allocation methodology. Of the 16,061.4 acres of TVA lands on the reservoir, TVA proposes to change the allocation of 5,707.7 acres (35.5 percent). Of those changes, 2,131.1 acres would be changed to reflect existing agreements and commitments and 3,576.6 acres would be changed based on other considerations.
Fort Loudoun (1,513.2 acres)	As detailed in Volume III of the EIS, TVA proposes major changes to Zone 6 (Developed Recreation) and Zone 7 (Shoreline Access) allocations. Zone 6 changes are proposed because previous planning efforts underestimated the amount of lands utilized for recreation or under existing recreational agreements. Zone 7 changes are proposed to more accurately reflect the lands encumbered with shoreline access rights. The proposed RLMP would replace allocations made using the Forecast System in the 1970s. Of the 1,513.2 acres of TVA lands on the reservoir, TVA proposes to change the allocation of 261.9 acres (17.3 percent). Of those changes, 102.6 acres would be changed to reflect existing agreements and commitments and 159.3 acres would be changed based on other considerations.
Great Falls (362.4 acres)	As detailed in Volume IV of the EIS, TVA proposes to use the relatively small area of TVA-managed lands on this reservoir for Zone 6 (Developed Recreation) based on the historical and proposed recreation operations of the State of Tennessee. The proposed RLMP would be the first land use plan developed for TVA public lands on Great Falls Reservoir.
Kentucky (74,713.5 acres)	As detailed in Volume V of the EIS, TVA proposes substantive changes to allocations of Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation) based on new information about the presence/absence of sensitive resources. More lands would be allocated to Zone 3 (an increase of 5 percent) and fewer lands would be allocated as Zone 4 (a decrease of almost 10 percent). Minor increases to Zone 2 (Project Operations), Zone 5 (Industrial), Zone 6 (Developed Recreation) and Zone 7 (Shoreline Access) allocations are also proposed. The proposed RLMP would replace TVA's Kentucky RLMP, developed in 1985 under the Multiple Use Tract Allocation methodology. Of the 74,713.5 acres of TVA lands on the reservoir, TVA proposes to change the allocation of 9,967.9 acres (13.3 percent). Of those changes, 4,057.5 acres would be changed to reflect existing agreements and commitments and 5,910.4 acres would be changed based on other considerations.

Reservoir (Acres of TVA Land)	Summary of Major RLMP Decisions
Nickajack (3,064.7 acres)	As detailed in Volume VI of the EIS, TVA proposes substantive changes to Zone 2, Zone 3 and Zone 4 allocations. The proposed increase in Zone 2 lands is primarily the result of previous underestimations in the amount of lands encumbered by roadways. The allocation change to one large parcel (Marion Memorial Bridge Natural Area) from Zone 4 to Zone 3 would result in the greatest allocation change under the RLMP, resulting in a large increase in Zone 3 (Sensitive Resource Management) lands and fewer lands allocated as Zone 4 (Natural Resource Conservation). Minor changes to Zone 5, Zone 6 and Zone 7 allocations are proposed. The proposed RLMP would replace TVA's Nickajack RLMP, developed in 1990 under the Multiple Use Tract Allocation methodology. Of the 3,064.7 acres of TVA lands on the reservoir, TVA proposes to change the allocation of 1,116.1 acres (31 percent). Of those changes, 664.8 acres would be changed to reflect existing agreements and commitments and 451.3 acres would be changed based on other considerations.
Normandy (4,797.2 acres)	As detailed in Volume VII of the EIS, TVA proposes relatively minor adjustments to parcel allocations across each land use zone. The greatest change would result in a decrease in Zone 3 (Sensitive Resource Management) parcels, largely due to reallocating one tract from Zone 3 to Zone 4 (Natural Resource Conservation) because new information indicates that sensitive resources are not known to be present in the area. The proposed RLMP would replace allocations made using the Forecast System in the 1970s. Of the 4,797.2 acres of TVA lands on the reservoir, TVA proposes to change the allocation of 1,399.5acres (29.2 percent). Of those changes, 1,006.3 acres would be changed to reflect existing agreements and commitments and 393.2 acres would be changed based on other considerations
Wheeler (36,045.2 acres)	As detailed in Volume VIII of the EIS, TVA proposes substantive changes to Zone 2, Zone 3, Zone 4 and Zone 6 allocations. TVA would increase allocations to Zone 2 to more accurately account for areas encumbered by roadways and road easements (an increase of almost 10 percent). Fewer lands would be allocated to Zone 3 because new information indicates the absence of known sensitive resources on numerous parcels. Some of these parcels would be reallocated for Zone 4 (5 percent). The proposed RLMP would replace TVA's Wheeler RLMP, developed in 1995 under the Multiple Use Tract Allocation methodology. Of the 36,045.2 acres of TVA lands on the reservoir, TVA proposes to change the allocation of 7,105.2 acres (19.7 percent those changes, 2,009.7 acres would be changed to reflect existing agreements and commitments and 5,095.5 acres would be changed based on other considerations

Reservoir (Acres of TVA Land)	Summary of Major RLMP Decisions
Wilson (1,223.4 acres)	As detailed in Volume IX of the EIS, TVA's proposed RLMP reflects circumstances unique to Wilson Reservoir. The proposed RLMP would be the first land use plan developed for TVA public lands on Wilson Reservoir. Approximately 87 percent of areas would be allocated for Project Operations (Zone 2) to reflect lands encumbered by transmission lines and utility easements and lands set aside to support future power operations of the dam (and potential navigation in and around the Wilson Lock and Fleet Harbor). Almost 13 percent of lands would be allocated as Zone 6 and a small tract would be allocated for Zone 7.

Affected Environment and Environmental Consequences

Land Use

Affected Environment. Existing land use patterns along the shoreline and back-lying land have been influenced by initial TVA land acquisition and subsequent disposition via the sale, transfer of ownership, or retention of properties. TVA originally acquired about 209,500 acres of land on the eight reservoirs, and about 38 percent (79,466 acres) of this land has been sold for private use or transferred to other federal and state agencies for public use. TVA presently manages a total of approximately 138,300 acres of land on these reservoirs, which are the subject of the eight RLMPs. The 4,673 miles of shoreline along these reservoirs is managed by TVA, either as flowage easement (1,285 miles) or shoreline access land (3,388 miles).

The amount of developed residential shoreline ranges from greater than 60 percent of the shoreline on Fort Loudoun Reservoir to approximately 17 percent on Kentucky Reservoir. No residential development is available on TVA parcels on Great Falls Reservoir. In total, approximately 41 percent of the shoreline of these reservoirs is available for residential development, and development has already occurred on about 35 percent of the available shoreline around the reservoirs. TVA's Land Policy does not allow additional land to be provided for residential use; therefore, the amount of shoreline available for residential use will not change as a result of the land planning process.

Land uses around the reservoirs remain primarily rural and natural. Existing land around the reservoirs is predominately undeveloped forested land. Other land uses include TVA project operations, recreation, residential and a small amount of industrial uses.

Many of the TVA-managed parcels on the eight reservoirs have existing land use agreements that commit a parcel to a specific use. The majority of the land use agreements are for uses such as utilities, highways, and other public infrastructure. Most of these public infrastructure uses affect narrow linear tracts with small acreages. A large proportion of the agreements are for public recreation and include such things as boat ramps, campgrounds and parks that are operated by local, county, and state government agencies. Less than 10 percent of the agreements are for commercial recreation and these agreements include docks, marinas, and commercial campgrounds found on several of the reservoirs.

Environmental Consequences. Land use impacts are based upon changes in the amount of land allocated to each zone. In terms of land use, the primary differences between the No Action Alternative (Alternative A) and the Proposed Land Plan Alternative (Alternative B) are associated with the reduction of lands allocated to Zone 3 and Zone 4 (Sensitive Resource Management and Natural Resource Conservation), and an increase in land allocated to Zone 6 (Developed Recreation). The proposed changes in land use allocations on each of the eight reservoirs are relatively minor and generally correspond to a "re-alignment" to reflect current land uses and conditions on each parcel. The primary impacts to land use associated with Alternative A result from the lack of a comprehensive plan to guide consideration of land use requests that would be applied in a consistent manner across all TVA reservoirs. Over the long term, absence of comprehensive reservoir-wide land plans may result in land uses that do not fully optimize the goals of multiple use and stewardship to which TVA strives.

Prime Farmland

Affected Environment. Approximately 35,827 acres of prime farmland occur on the 138,305 acres of lands around the eight reservoirs. The geographic extent of prime farmlands on the reservoirs considered in this EIS includes seven counties in Alabama, three in Kentucky, and 25 in Tennessee. Prime farmland is found in each of these counties, comprising between 6 and 62 percent of the total area in a county. The total area of prime farmland associated with the eight RLMPs is small (about 1.0 percent) relative to the almost 3 million acres of prime farmland occurring in the counties around the eight reservoirs. The majority of the parcels around the eight reservoirs, including those containing prime farmland, are already committed to land uses other than agriculture.

Environmental Consequences. Potential for future ground disturbance and development has the potential to impact prime farmland. A slightly higher amount of land would be allocated to land use zones with a greater potential for future ground disturbance and development, Zone 2 (Project Operations), Zone 5 (Industrial) and Zone 6 (Developed Recreation) under Alternative B. However, because the proportion of prime farmland and farmland of statewide importance on reservoir land is small, adverse impacts to prime farmland would be minor under both alternatives.

Recreation

Affected Environment. Recreation facilities and amenities on TVA shoreline properties adjacent to the eight reservoirs include: 74 campgrounds, 79 marinas, 234 developed boat launching ramps, and many day use facilities such as picnic areas, swimming beaches, ball fields, fishing piers, and golf courses. TVA managed lands around the eight reservoirs also offer abundant opportunity for dispersed recreation.

Environmental Consequences. Neither alternative would impact currently developed recreation facilities. The variation in the amount of land available for developed and dispersed recreation opportunities under both alternatives is small and correspond to a "re-alignment" to reflect current land uses and conditions on each parcel. Overall, the management of recreation opportunities would benefit from the development and implementation of Alternative B as each RLMP would follow a consistent, systematic process for identifying developed and dispersed recreational opportunities on individual parcels.

Terrestrial Ecology and Threatened and Endangered Species

Affected Environment. The eight reservoirs are located in five ecoregions: Ridge and Valley, Interior Plateau, Southwestern Appalachians, Southeastern Plains, and Mississippi Loess Plains. Deciduous forests and woodlands cover approximately 38 percent of the landscape and are composed of diverse communities ranging from mesic (moist) cove hardwood forest to xeric (dry) upland oak forests. Mixed evergreen-deciduous forests occupy approximately 20 percent of the land cover and primarily consist of moist mixed-hardwood forests and dry pine and pine-oak forests. Less than 5 percent of the land cover consists of evergreen forests and evergreen woodlands. In addition, approximately 4 percent of the land cover is considered woody wetlands primarily located within floodplain hardwood forests. Herbaceous vegetation in the form of grasslands, hay fields, and pasture make up approximately 19 percent of the land cover around the reservoirs. Transition areas consisting of shrub/scrub habitat makes up 3 percent of the land cover.

The variety of land forms, soils, climate, and geology across these ecoregions support an extremely diverse assemblage of wildlife. The reservoirs provide abundant open water habitats and associated riparian (shoreline) zones that are used by a variety of wildlife including shorebirds, wading birds, waterfowl, amphibians, reptiles, and mammals.

There are 49 records of federally or state-listed threatened or endangered plants and 38 records of terrestrial wildlife species on parcels within the eight RLMPs and 178 aquatic species recorded on TVA parcels and within the reservoirs. Many of the TVA parcels included in the eight RLMPs also contain invasive nonnative species. More information on specific records and habitat requirements of federally and state-listed threatened or endangered species are included in the individual RLMPs (Volumes II through IX).

Caves also provide unique habitat for certain insect and wildlife species. A total of 937 caves occur within 3 miles of the eight reservoirs, and 35 caves occur on TVA parcels. The majority of the parcels containing caves are allocated to Zone 3 (Sensitive Resource Management) as threatened or endangered species have been recorded in several of these caves. Because caves are extremely fragile and biologically significant, TVA typically maintains an undisturbed 200-foot-wide buffer zone around caves.

Environmental Consequences. Under both alternatives, project-specific surveys would be conducted prior to clearing potential wildlife habitats to evaluate the presence of, and potential impacts to uncommon or rare species. Consequently, impacts would be minor under both alternatives because if any listed species are detected in these areas, additional steps would be taken during the planning process to avoid, minimize, and/or mitigate the project impacts. A slightly higher amount of land would be allocated to land use zones with a greater potential for future ground disturbance and development, Zone 2 (Project Operations), Zone 5 (Industrial) and Zone 6 (Recreation) under Alternative B. However as proposed allocations generally correspond to a “re-alignment” to reflect current conditions on each parcel, and as the overall proportion of land allocated to Zones 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation) would exceed 75 percent, this impact would be minor.

Any future development of lands potentially supporting use by sensitive species would be coordinated with both state and federal agencies, as appropriate. Therefore impacts to threatened and endangered species are not anticipated under either alternative.

Aquatic Ecology

Affected Environment. Biennial Reservoir Fish Assemblage Index (RFAI) and benthic macroinvertebrate scores recorded between 2010 and 2012 indicate that fish assemblage scores are typically fair to good in seven of the reservoirs. Monitoring by TVA under the RFAI program is not conducted on the Great Falls Reservoir. Benthic scores are poor for Normandy Reservoir, fair to poor for Fort Loudoun, and poor to good for Kentucky, Wilson, and Wheeler reservoirs. Only the Chickamauga and Nickajack reservoirs had scores that ranged from fair to good. Detailed results of RFAI and benthic macroinvertebrate sampling are provided in the individual RLMPs (Volumes II through IX).

Environmental Consequences. Compared to Alternative A, Alternative B includes a small reduction in the portion of TVA-managed land allocated to Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation). Accordingly, Alternative B would have an increase in land allocated to Zone 2 (Project Operations), Zone 6 (Developed Recreation) and Zone 7 (Shoreline Access) and would have a higher potential for future ground disturbance and development that could negatively impact aquatic ecology. Many (approximately 7 percent) of the proposed changes in allocation generally correspond to a “re-alignment” to reflect current land uses and conditions on each parcel. Approximately 11 percent of the changes in allocation of the TVA-managed lands on the eight reservoirs are proposed as a result of the planning process described in Section 2.4.1 of the EIS. This process included an evaluation of known and potential sensitive resources and the capability and suitability for potential uses of each parcel as well as public input. However, any new development would be subject to site-specific environmental review, applicable state and federal regulations, and TVA guidelines for minimizing impacts to aquatic habitat. Therefore, while the potential amount of adverse impacts to aquatic resources under Alternative B could be slightly greater than those under Alternative A, the changes in amount of potentially negative impacts would be relatively minor.

Water Quality

Affected Environment. Water quality of the reservoirs is typical of impoundments with slower-moving water and vertical variations in temperature, dissolved oxygen, and other water quality characteristics. The eight RLMPs encompass a relatively small fraction of the total watershed for each of the reservoirs. Residence times are relatively short, ranging from 3 days to 19 days, with the exception of Normandy Reservoir where residence time is approximately 141 days. Long residence time and high nutrient loading from the surrounding watershed, commonly result in poor water quality conditions.

Water quality conditions within TVA reservoirs are evaluated by several programs designed to monitor the chemical and biological conditions of the aquatic environment. These programs include state monitoring programs designed to evaluate impairment, and TVA’s reservoir health monitoring program. The Tennessee Department of Conservation has identified segments of the Chickamauga, Fort Loudoun, and Nickajack reservoirs as being impaired due to mercury, polychlorinated biphenyl (PCB) and dioxin contaminated sediments. Nine different water body segments within Wheeler Lake encompassing the entire reservoir and McKiernan Creek at Wilson Reservoir are identified by the Alabama Department of Environmental Management (ADEM) as being impaired by nutrients from agricultural sources. At Wilson Reservoir, the McKiernan Creek is identified as being impaired by nutrients from agricultural sources. Additionally, the entire Wilson Reservoir from Wheeler Dam to Wilson Dam, with area of 15,311 acres, has been included ADEM’s 2016 final draft 303(d) list.

Reservoir ecological health scores for dissolved oxygen, chlorophyll and sediment ranged from poor to good for seven of the reservoirs. The Great Falls Reservoir is not part of TVA's Reservoir Ecological Health Monitoring Program. Dissolved oxygen is a common concern in reservoirs, particularly when hydroelectric facilities discharge water through the turbines, limiting re-oxygenation that might otherwise occur at a spillway discharge. Most of the water withdrawals and wastewater discharges within the reservoir system are used as cooling water in power generation.

Environmental Consequences. Compared to Alternative A, Alternative B includes a small reduction in the portion of TVA-managed land allocated to Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation) and an increase in land allocated to Zone 2 (Project Operations), Zone 6 (Developed Recreation) and Zone 7 (Shoreline Access) which have a higher potential for future ground disturbance and development that could impact water quality. Although many of the proposed changes in allocation generally correspond to a "re-alignment" to reflect current land uses and conditions on each parcel, new development would be subject to site-specific environmental review, applicable state and federal regulations, and TVA guidelines for minimizing impacts to water quality. Therefore, while the potential amount of adverse impacts to water quality under Alternative B could be slightly greater than those under Alternative A, the changes in amount of potentially negative impacts would be relatively minor.

Wetlands

Affected Environment. Palustrine forested wetlands are the most abundant type of wetland found in the reservoirs and make up approximately 65 percent of the 41,653.3 acres of wetland found on TVA lands on the eight reservoirs. Wetlands tend to be smaller and do not occur as frequently on tributary reservoirs such as Great Falls and Normandy because of the relatively steep drawdown zones, the rolling to steep topography of adjacent lands, shoreline disturbance caused by wave action, and the lower predictability and shorter duration of summer pool levels.

Environmental Consequences. Under Alternative B, a slightly greater amount of land would be allocated to Zone 2 (Project Operations), Zone 5 (Industrial) and Zone 6 (Developed Recreation) which have a greater potential for future ground disturbance and development that could impact wetlands. However, because most wetlands would be preserved within land use zones not subject to development, and because wetlands are regulated under Executive Order (EO) 11990 and Section 404(b)(1) of the Clean Water Act that require avoidance and minimization measures, impacts to wetlands are expected to be minor and fully mitigated.

Floodplains

Affected Environment. As a federal agency, TVA is subject to the requirements of EO 11988 (Floodplain Management). The EO is not intended to prohibit floodplain development in all cases, but rather to create a consistent government policy against such development under most circumstances. The EO requires that agencies avoid the 100-year floodplain unless there is no practicable alternative.

Environmental Consequences. Under either alternative, the development and/or management of properties and evaluations of proposed actions would be done individually to ensure consistency with EO 11988. Potential development would generally consist of

water use facilities and other repetitive actions in the floodplain that would result in minor floodplain impacts, if any. Although there could be impacts to floodplains under either alternative, potential impacts to floodplains and to natural and beneficial floodplain values would be evaluated under EO 11988 on a case-by-case basis, and measures to reduce or eliminate adverse impacts would be determined at that time.

Air Quality and Climate Change

Affected Environment. Most reservoirs are in counties in attainment of the National Ambient Air Quality Standards. Fort Loudoun Reservoir is located in counties that are in nonattainment for particulate matter ($PM_{2.5}$). The State of Tennessee, however, anticipates submitting a re-designation request in October 2106 to the U.S. Environmental Protection Agency to have the designation changed to attainment.

Environmental Consequences. A majority of reservoir lands would remain allocated for conservation or resource protection. Under Alternative B, a slightly higher amount of land would be allocated to land use zones wherein it is more likely that activities resulting in air emissions would occur. These land use zones include Zone 2 (Project Operations), Zone 5 (Industrial) and Zone 6 (Developed Recreation). However, under any of the alternatives, an appropriate level of environmental review and permitting pursuant to requirements of the Clean Air Act would be required as appropriate, to assess project-specific air quality impacts or greenhouse gas emissions and ensure that effects on regional air quality and climate change are minor.

Cultural and Historic Resources

Affected Environment. Although the entirety of TVA-managed land surrounding the eight reservoirs has not been completely surveyed, archaeological sites have been identified on each of the reservoirs. Based on limited surveys, approximately 4,003 archaeological sites and 1,443 historic structures have been recorded on or near these reservoirs. Some of these archaeological sites are located below the normal summer pool elevation. Certain sites are eligible or potentially eligible for listing on the National Register of Historic Places.

Environmental Consequences. Under both alternatives, all cultural resources would be subject to the regulatory requirements of the National Historic Preservation Act (NHPA). Under Alternative B, there are commitments for the management of cultural resources within Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation) that would effectively preserve resources within the planned parcels. For any proposed undertaking, regardless of the zone allocation, TVA will take necessary steps to ensure compliance with the regulatory requirements under the NHPA and consider the development's effects as they are proposed to known and/or unknown cultural resources. TVA will comply with the Natural Resource Plan (NRP) Programmatic Agreement executed in 2011 in consultation with the State Historic Preservation Officer (SHPO), Advisory Council of Historic Preservation and federally recognized Indian tribes which subsumes and governs all past and future land plans. Impacts to cultural and historic resources from the proposed RLMPs are therefore expected to be minor.

Natural Areas and Ecologically Significant Sites

Affected Environment. Natural areas occurring on TVA lands include both TVA- and non-TVA managed areas. A review of the TVA Natural Heritage database indicated that 46 natural areas managed by the TVA Natural Areas Program are included within six of the eight RLMPs. No TVA-managed natural areas are located in Fort Loudoun or Great Falls

reservoirs. An additional 135 natural areas, either managed by other entities or recognized as ecologically significant, are located within the eight RLMPs.

Environmental Consequences. Natural areas are generally located on committed parcels allocated according to their prescribed land use to one of four land management zones: Zone 2 (Project Operations), Zone 3 (Sensitive Resource Management), Zone 4 (Natural Resource Conservation) and Zone 6 (Developed Recreation). Additionally, committed parcels fronting natural areas that are situated on back-lying public lands are zoned according the use of the back-lying land and are allocated the appropriate land management zone. Natural areas situated on Zones 3 and 4 are managed for the protection and enhancement of resources and are not subject to adverse impacts; therefore properties located within these zones would remain “natural” and not be converted to other land uses, thereby preserving the natural areas. Overall, the efficient management and protection of TVA-designated natural areas and ecologically significant sites will benefit from the development and implementation of Alternative B as each RLMP provides a systematic process for identifying these areas and implementing management objectives for parcels which contain these sites.

Aesthetics and Visual Resources

Affected Environment. The reservoirs within the eight RLMPs include a variety of visual resources. Various combinations of development and land use patterns that are present in the viewed landscapes along the shorelines of the eight reservoirs contribute to the overall visual character of the project area. Among the scenic resources of each of the reservoirs, the water body itself is the most distinct aesthetic feature. Islands, secluded coves, and steep, wooded ridges are other important visual resources that contribute to scenic integrity. Urban, operations-related, and industrial developments generally create a lower level of scenic integrity. The size of the eight reservoirs and the amount of TVA-managed land on each of the reservoirs vary greatly. Where TVA lands represent a small portion of the reservoir’s overall shoreline (e.g., Fort Loudoun and Wilson reservoirs), the effects of TVA management of its lands on the overall visual character of the reservoir is generally very limited. Conversely, where TVA lands make up a large portion of the reservoir’s shoreline (Kentucky and Wheeler reservoirs), TVA land management decisions may greatly influence the scenic character of the reservoir.

Environmental Consequences. Under Alternative A, the allocation of selected lands would continue to be based on the current RLMPs for each reservoir. However, these RLMPs may not fully incorporate the current aesthetic resources within the reservoirs. As a result, long-term negative impacts to visual resources and scenic integrity could include gradual losses of visual quality, scenic attractiveness, and undeveloped areas, as well as negative changes in the aesthetic sense of place.

Under Alternative B, the eight RLMPs would enhance conservation and protection of scenic resources as scenic values were considered during the allocation process. Parcels having distinctive and valuable visual characteristics such as islands, rock bluffs, steep and wooded ridges, wetlands, and flowing shallow water areas were typically allocated to either Zone 3 (Sensitive Resource Management) or Zone 4 (Natural Resource Conservation), and thus, are unlikely to be disturbed under Alternative B. These Zone 3 and 4 lands typically provide valuable protective screening and important scenic buffers. Therefore, while activities on parcels allocated to Zones 2, 5, 6, and 7 have the greatest potential to

decrease aesthetics value, these parcels likely have the lowest scenic value. Under both action alternatives, impacts to visual resources would be minor.

Noise

Affected Environment. Sources of noise along each of the eight reservoirs include industrial development, power generation facilities, substations, developed recreation sites, recreational watercraft use, navigation uses and automobile traffic. Lands allocated to Zone 5 (Industrial) have the greatest potential to support uses that produce higher levels of noise.

Environmental Consequences. Although there would be an increase in the overall amount of land allocated to zones which have the potential for notable noise emissions, based on the proportion of land in the eight RLMPs available for development relative to the entire shoreline of the eight reservoirs, there would be only a minor increase in the potential for noise impacts associated with Alternative B relative to Alternative A. Current uses of the great majority of the TVA lands on the eight reservoirs would not change under either of the alternatives.

Socioeconomics and Environmental Justice

Affected Environment. The estimated population of the 36 counties that include the reservoirs is 2,513,709. Projections and current trends suggest that the population of this area will increase by approximately 6.9 percent by the year 2020, which is slightly higher than the projected 5 percent growth rate for the nation. Overall, the rural population share in the area is about the same as state averages, which are somewhat higher than the national average. The population is predominantly white, with the average minority population comparable to the state of Kentucky, but lower than Tennessee and Alabama. Overall, poverty levels are slightly higher than levels across the state of Tennessee and are the same as levels across Kentucky and Alabama. Management, Business Science, and Arts accounts for the largest share of civilian employment at nearly 35 percent within the area counties as well as within each of the states. The unemployment rate for the area counties between 2010 and 2014 was 5.8 percent. The only state with a lower unemployment rate than the area counties was Kentucky, with an unemployment rate of 5.5 percent.

Environmental Consequences. Under Alternative B, changes in land allocations are relatively minor and generally reflect correspond to a “re-alignment” to reflect current land uses and conditions on each parcel. However, implementation of Alternative B would enhance management of public lands, which would have a minor beneficial impact on the local economy in the area through the enhancement and potential future development of developed as well as dispersed recreation opportunities.

No disproportionate impacts to disadvantaged populations are expected to occur under either of the alternatives.

Summary of Impacts

Under the No Action Alternative (Alternative A), the total number of acres of TVA land on the eight reservoirs that would be equivalently designated to Zone 2 (Project Operations), Zone 5 (Industrial) and Zone 6 (Developed Recreation) is less than under Alternative B – Proposed Land Use Alternative. However, proposed land allocations under Alternative B were primarily proposed to reflect existing conditions and suitable uses of land, and as such

the difference between the two alternatives is minor. No significant direct, indirect, or cumulative effects are expected to occur to any resource under either alternative.

In contrast to Alternative B, the No Action Alternative would continue its use of previous land planning methodologies (Forecast System and Multiple Use Tract Allocation) for those reservoirs previously planned. For those reservoirs that were not previously planned, lands would be managed in accordance with existing commitments, agreements and TVA Policy. TVA would not fully implement a systematic and comprehensive planning approach to the management, retention, and disposal of reservoir lands managed by TVA. As such Alternative A would not result in the benefits of comprehensive land planning across the entire range of lands associated with the eight reservoirs.

Preferred Alternative

The preferred alternative is Alternative B – Proposed Land Use Plan Alternative. Alternative B provides advantages relative to Alternative A as it establishes as a planning framework for RLMPs that brings consistency to the land planning process across the eight reservoirs considered in this document. Alternative B also applies a systematic method of evaluating and identifying the most suitable uses of TVA public lands in furtherance of TVA's responsibilities under the TVA Act. Under the preferred alternative the proposed RLMPs would be used to guide land use approvals, private water use facility permitting, and resource management decisions on the eight reservoirs. The planning team would use the proposed RLMPs along with TVA policies and guidelines to manage resources and respond to requests for the use of TVA public land.

TABLE OF CONTENTS
MULTIPLE RESERVOIR LAND MANAGEMENT PLANS

THE FOLLOWING IS AN OVERVIEW OF THE CONTENTS OF ALL NINE VOLUMES OF THIS DRAFT EIS. DETAILED TABLES OF CONTENTS ARE FOUND AT THE BEGINNING OF EACH DOCUMENT

VOLUME I – DRAFT ENVIRONMENTAL IMPACT STATEMENT
CHAPTER 1 – PURPOSE AND NEED FOR ACTION I-1
CHAPTER 2 – ALTERNATIVES INCLUDING THE PROPOSED ACTION I-19
CHAPTER 3 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUE4NCES I-35
CHAPTER 4 – LIST OF PREPARERS I-119
CHAPTER 5 – EIS RECIPIENTS I-125
CHAPTER 6 – SUPPORTING INFORMATION I-139

VOLUME II – CHICKAMAUGA RESERVOIR, DRAFT RESERVOIR LAND MANAGEMENT PLAN
CHAPTER 1 – INTRODUCTION II-1
CHAPTER 2 – REGIONAL OVERVIEW II-7
CHAPTER 3 – LAND PLANNING PROCESS II-57
CHAPTER 4 – PARCEL DESCRIPTIONS II-71
CHAPTER 5 – PLANNING TEAM II-331
CHAPTER 6 – LITERATURE CITED II-333
GLOSSARY II-337
INDEX II-337

VOLUME III – FORT LOUDOUN, DRAFT RESERVOIR LAND MANAGEMENT PLAN
CHAPTER 1 – INTRODUCTION III-1
CHAPTER 2 – REGIONAL OVERVIEW III-8
CHAPTER 3 – LAND PLANNING PROCESS III-45
CHAPTER 4 – PARCEL DESCRIPTIONS III-59
CHAPTER 5 – PLANNING TEAM III-133
CHAPTER 6 – LITERATURE CITED III-135
GLOSSARY III-139
INDEX III-141

VOLUME IV – GREAT FALLS RESERVOIR, DRAFT RESERVOIR LAND MANAGEMENT PLAN
CHAPTER 1 – INTRODUCTION IV-1
CHAPTER 2 – REGIONAL OVERVIEW IV-7
CHAPTER 3 – LAND PLANNING PROCESS IV-41
CHAPTER 4 – PARCEL DESCRIPTIONS IV-51

CHAPTER 5 – PLANNING TEAM IV-55
CHAPTER 6 – LITERATURE CITED IV-57
GLOSSARY IV-59
INDEX IV-61

VOLUME V – KENTUCKY, DRAFT RESERVOIR LAND MANAGEMENT PLAN
CHAPTER 1 – INTRODUCTION V-1
CHAPTER 2 – REGIONAL OVERVIEW V-7
CHAPTER 3 – LAND PLANNING PROCESS V-71
CHAPTER 4 – PARCEL DESCRIPTIONS V-85
CHAPTER 5 –PLANNING TEAM V-485
CHAPTER 6 – LITERATURE CITED V-487
GLOSSARY V-491
INDEX V-493

VOLUME VI – NICKAJACK, DRAFT RESERVOIR LAND MANAGEMENT PLAN
CHAPTER 1 – INTRODUCTION VI-1
CHAPTER 2 – REGIONAL OVERVIEW VI-9
CHAPTER 3 – LAND PLANNING PROCESS VI-53
CHAPTER 4 – PARCEL DESCRIPTIONS VI-67
CHAPTER 5 – PLANNING TEAM VI-93
CHAPTER 6 – LITERATURE CITED VI-95
GLOSSARY VI-99
INDEX VI-101

VOLUME VII – NORMANDY RESERVOIR, DRAFT RESERVOIR LAND MANAGEMENT PLAN
CHAPTER 1 – INTRODUCTION VII-1
CHAPTER 2 – REGIONAL OVERVIEW VII-7
CHAPTER 3 – LAND PLANNING PROCESS VII-43
CHAPTER 4 – PARCEL DESCRIPTIONS VII-55
CHAPTER 5 – PLANNING TEAM VII-77
CHAPTER 6 – LITERATURE CITED VII-79
GLOSSARY VII-83
INDEX VII-85

VOLUME VIII – WHEELER RESERVOIR, DRAFT RESERVOIR LAND MANAGEMENT PLAN.
CHAPTER 1 – INTRODUCTION VIII-1
CHAPTER 2 – REGIONAL OVERVIEW VIII-7
CHAPTER 3 – LAND PLANNING PROCESS VIII-59
CHAPTER 4 – PARCEL DESCRIPTIONS VIII-73
CHAPTER 5 – PREPARERS VIII-245
CHAPTER 6 – LITERATURE CITED VIII-257
GLOSSARY VIII-251
INDEX VIII-253

VOLUME IX – WILSON RESERVOIR, DRAFT RESERVOIR LAND MANAGEMENT PLAN
CHAPTER 1 – INTRODUCTION IX-1
CHAPTER 2 – REGIONAL OVERVIEW IX-7
CHAPTER 3 – LAND PLANNING PROCESS IX-53
CHAPTER 4 – PARCEL DESCRIPTIONS IX-65
CHAPTER 5 – PREPARERS IX-77
CHAPTER 6 – LITERATURE CITED IX-79
GLOSSARY IX-83
INDEX IX-85

This page intentionally left blank

TABLE OF CONTENTS
VOLUME I – ENVIRONMENTAL IMPACT STATEMENT

CHAPTER 1 – PURPOSE AND NEED FOR ACTION I-1

1.1 Background I-1
1.2 Description of the Proposed Action I-6
1.3 Purpose and Need I-8
1.4 Structure of the Multiple Reservoir Land Management Plan EIS I-9
1.5 The Decision I-10
1.6 Other Pertinent Environmental Reviews or Documentation I-10
1.7 The Scoping Process I-13
1.7.1 Scoping and Public Involvement I-13
1.7.2 Scoping Response I-14
1.7.3 Issue and Resource Identification I-14
1.8 Public Review Process I-16
1.9 Required Permits and Consultation I-17

CHAPTER 2 – ALTERNATIVES INCLUDING THE PROPOSED ACTION I-19

2.1 Development of Alternatives I-19
2.2 Property Administration I-19
2.3 Alternative A – No Action Alternative I-20
2.4 Alternative B – Proposed Land Use Plan Alternative I-22
2.4.1 The Planning Process I-22
2.4.2 Committed Land I-22
2.4.3 Uncommitted Land I-23
2.4.4 Land Committed to Shoreline Access I-23
2.4.5 Description of Alternative B – Proposed Land Use Plan Alternative I-23
2.4.5.1 Land Reserved for Shoreline Access I-26
2.4.5.2 Comprehensive Valleywide Land Plan I-27
2.5 Comparison of Alternatives I-28
2.6 Summary of Impacts I-29
2.7 Identification of Mitigation Measures I-33
2.8 Preferred Alternative I-33

CHAPTER 3 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES I-35

3.1 Description of the Reservoirs I-36
3.1.1 Chickamauga Reservoir I-36
3.1.2 Fort Loudoun Reservoir I-37
3.1.3 Great Falls Reservoir I-37
3.1.4 Kentucky Reservoir I-37
3.1.5 Nickajack Reservoir I-38
3.1.6 Normandy Reservoir I-38
3.1.7 Wheeler Reservoir I-38
3.1.8 Wilson Reservoir I-38
3.2 Land Use I-39
3.2.1 Affected Environment I-39
3.2.2 Environmental Consequences I-41
3.2.2.1 Alternative A – No Action I-42
3.2.2.2 Alternative B – Proposed Land Use Plan Alternative I-42

3.3 Prime Farmland I-45
3.3.1 Affected Environment I-45
3.3.2 Environmental Consequences I-47
3.3.2.1 Alternative A – No Action Alternative I-48
3.3.2.2 Alternative B – Action Alternative I-49
3.4 Recreation I-49
3.4.1 Affected Environment I-49
3.4.2 Environmental Consequences I-50
3.4.2.1 Alternative A I-51
3.4.2.2 Alternative B I-51
3.5 Terrestrial Ecology I-52
3.5.1 Affected Environment I-52
3.5.1.1 Plant Communities I-52
3.5.1.2 Wildlife Communities I-54
3.5.2 Environmental Consequences I-57
3.5.3 Plant Communities I-60
3.5.3.1 Alternative A – No Action Alternative I-60
3.5.3.2 Alternative B – Proposed Land Use Plan Alternative I-60
3.5.4 Wildlife Communities I-61
3.5.4.1 Alternative A – No Action Alternative I-61
3.5.4.2 Alternative B – Proposed Land Use Plan Alternative I-61
3.6 Aquatic Ecology I-62
3.6.1 Affected Environment I-62
3.6.2 Environmental Consequences I-64
3.6.2.1 Alternative A – No Action Alternative I-65
3.6.2.2 Alternative B – Action Alternative I-65
3.7 Threatened and Endangered Species I-66
3.7.1 Affected Environment I-66
3.7.2 Environmental Consequences I-67
3.7.2.1 Alternative A – No Action Alternative I-68
3.7.2.2 Alternative B – Proposed Land Use Plan Alternative I-68
3.8 Water Quality I-70
3.8.1 Affected Environment I-70
3.8.1.1 Water Quality Monitoring I-74
3.8.1.2 Water Supply I-80
3.8.2 Environmental Consequences I-81
3.8.2.1 Alternative A – No Action Alternative I-82
3.8.2.2 Alternative B – Proposed Land Use Plan Alternative I-82
3.9 Wetlands I-83
3.9.1 Affected Environment I-83
3.9.2 Environmental Consequences I-84
3.9.2.1 Alternative A – No Action Alternative I-85
3.9.2.2 Alternative B – Proposed Land Use Plan Alternative I-85
3.10 Floodplains I-86
3.10.1 Affected Environment I-86
3.10.2 Environmental Consequences I-87
3.10.2.1 Alternative A – No Action Alternative I-87
3.10.2.2 Alternative B – Proposed Land Use Plan Alternative I-87
3.11 Air Quality and Climate Change I-88
3.11.1 Affected Environment I-88
3.11.1.1 Air Quality I-88

3.11.1.2 Climate Change I-89
3.11.2 Environmental Consequences I-90
3.11.2.1 Alternative A – No Action Alternative I-90
3.11.2.2 Alternative B – Proposed Land Use Plan Alternative I-90
3.12 Cultural and Historic Resources I-91
3.12.1 Affected Environment I-91
3.12.1.1 Archaeological Resources I-92
3.12.1.2 Historic Structures I-93
3.12.2 Environmental Consequences I-94
3.12.2.1 Alternative A – No Action Alternative I-95
3.12.2.2 Alternative B – Proposed Land Use Plan Alternative I-95
3.13 Natural Areas and Ecologically Significant Sites I-96
3.13.1 Affected Environment I-96
3.13.2 Environmental Consequences I-97
3.13.2.1 Alternative A – No Action Alternative I-98
3.13.2.2 Alternative B – Proposed Land Use Plan Alternative I-98
3.14 Aesthetics and Visual Resources I-98
3.14.1 Affected Environment I-98
3.14.2 Environmental Consequences I-100
3.14.2.1 Alternative A – No Action Alternative I-101
3.14.2.2 Alternative B – Proposed Land Use Plan Alternative I-101
3.15 Noise I-102
3.15.1 Affected Environment I-102
3.15.2 Environmental Consequences I-103
3.15.2.1 Alternative A – No Action Alternative I-105
3.15.2.2 Alternative B – Proposed Land Use Plan Alternative I-105
3.16 Socioeconomics and Environmental Justice I-106
3.16.1 Affected Environment I-107
3.16.1.1 Population and Economy I-107
3.16.1.2 Environmental Justice I-107
3.16.2 Environmental Consequences I-114
3.16.2.1 Alternative – No Action Alternative I-114
3.16.2.2 Alternative B – Proposed Land Use Plan Alternative I-114
3.16.3 Environmental Justice I-115
3.17 Unavoidable Adverse Effects I-115
3.18 Irreversible and Irretrievable Commitments I-115
3.19 Energy Resources and Conservation Potential I-115
3.20 Relationship of Short-Term Uses to Long-Term Productivity I-116
3.21 Cumulative Effects I-117

CHAPTER 4 – LIST OF PREPARERS I-119

4.1 Project Management I-119
4.2 Other Contributors I-119

CHAPTER 5 – EIS RECIPIENTS I-125

CHAPTER 6 – SUPPORTING INFORMATION I-139

6.1 Literature Cited I-139
6.2 Glossary of Terms I-144

LIST OF APPENDICES

Appendix A – TVA Land Policy I-153
Appendix B – Forecast System Definitions I-159
Appendix C – Allocation Differences Among Alternatives I-163
Appendix D – Supporting Data I-239

LIST OF TABLES

Table 1-1. Land Use Zone Definitions I-2
Table 1-2. Land Acquisition and Disposal Data I-8
Table 2-1. Area by Equivalent Current Land Use Designations by Reservoir I-21
Table 2-2. Committed and Uncommitted Acreage by Reservoir I-23
Table 2-3. Proposed Area Allocation Zone by Reservoir (Alternative B) I-24
Table 2-4. Summary of Proposed Land Allocations by RLMP - Alternative B I-24
Table 2-5. Summary of Changes in Zone 7 Allocation – Alternative B I-27
Table 2-6. Proposed Update to CVLP Allocations I-27
Table 2-7. Lands Reallocated by Reservoir for Alternatives A and B I-29
Table 2-8. Summary and Comparison of Alternatives by Resource Area I-30
Table 3-1. Selected Characteristics of Reservoirs Included in the Multiple Land Plan EIS I-36
Table 3-2. Shoreline Ownership Data I-39
Table 3-3. Percent of Shoreline Available for Residential Development and Percent of Available Shoreline Developed I-40
Table 3-4. Summary of All Land Use Agreements on the Eight Reservoirs I-41
Table 3-5. Area and Number of Parcels Having Prime Farmland or Farmland of Statewide Importance on the Eight RLMPs I-45
Table 3-6. Prime Farmland and Farming Trends in the Counties Where the Reservoirs are Located I-46
Table 3-7. Prime Farmland and Land of Statewide Importance Allocated to Each Land Management Zone Under Alternatives A and B I-48
Table 3-8. Developed and Dispersed Recreation in the Eight RLMPs I-50
Table 3-9. Invasive Non-Native Species that Pose a Severe Threat Known to Occur in States Containing the Eight RLMPs I-53
Table 3-10. Comparison of Land Cover Types by Land Management Zone by Alternative I-59
Table 3-11. Reservoir Health Ratings I-64
Table 3-12. Records of Threatened and Endangered Species in the Vicinity of TVA Reservoirs I-66
Table 3-13. Known Records of Listed Species by Land Use Allocation Zone I-68
Table 3-14. Physical and Operational Characteristics of Reservoirs I-73
Table 3-15. Tennessee Department of Environment and Conservation 303(d) Listed Water Bodies Associated with the Chickamauga, Fort Loudoun, Great Falls, Kentucky, Nickajack, and Normandy Reservoirs I-75
Table 3-16. Alabama DEM 303(d) Listed Water Bodies Associated with the Wheeler and Wilson Reservoirs I-76
Table 3-17. Dissolved Oxygen Scores in Reservoirs I-78
Table 3-18. Chlorophyll Scores in Reservoirs I-79
Table 3-19. Sediment Scores in Reservoirs I-80
Table 3-20. Direct Reservoir Average Daily Water Supply Withdrawals and Wastewater Discharges I-81
Table 3-21. Summary of Wetlands on TVA Reservoirs by Area and Type I-84
Table 3-22. Wetland Types Based on Land Management Zone Allocation- Alternative A I-85
Table 3-23. Wetland Types Based on Land Management Zone Allocation – Alternative B I-86
Table 3-24. Air Quality Attainment Status by County I-88

Table 3-25. Approximate Number of Archaeological Sites Identified on TVA Lands and Acres Systematically Surveyed per Reservation I-93
Table 3-26. Number of Historic Structures Surveyed I-94
Table 3-27. Natural Areas Managed by TVA on Reservoir Lands I-96
Table 3-28. Comparison of Common Sound Levels I-104
Table 3-29. Population Characteristics I-108
Table 3-30. Economic Characteristics I-110
Table 3-31. Racial Characteristics I-112

LIST OF FIGURES

Figure 1-1. Location of Chickamauga, Fort Loudoun, Great Falls, Kentucky, Nickajack, Normandy, Wheeler and Wilson Reservoirs I-7

This page intentionally left blank

SYMBOLS, ACRONYMS, AND ABBREVIATIONS

§	Section
APE	Area of Potential Effect
BMP	Best Management Practices
CAA	Clean Air Act
CFR	Code of Federal Regulations
cfs	Cubic Feet per Second
cfs/sq mi	Cubic Feet per Second per Square Mile
CVLP	Comprehensive Valleywide Land Plan
CWA	Clean Water Act
dBA	A-Weighted Decibels
DO	Dissolved Oxygen
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
ESA	Endangered Species Act of 1973
FH	Floating Houses
HUD	U.S. Department of Housing and Urban Development
Ldn	Day-Night Average Sound Levels
Leq	Sound Level Equivalents
MSC	Maximum Shoreline Contour
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NN	Non-Navigable Houseboats
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRI	Nationwide Rivers Inventory
NRP	Natural Resource Plan
NWI	National Wetland Inventory
PCB	Polychlorinated Biphenyl
PM	Particulate Matter
PSD	Prevention of Significant Deterioration
RFAI	Reservoir Fish Assemblage Index
RLA	Rapid Lands Assessment
RLMP	Reservoir Land Management Plan
RVSMP	Reservoir Vital Signs Monitoring Program
SHPO	State Historic Preservation Officer
SMI	Shoreline Management Initiative
SMP	Shoreline Management Policy
TMDL	Total Maximum Daily Load
TRM	Tennessee River Mile
TVA	Tennessee Valley Authority
TWRA	Tennessee Wildlife Resources Agency
USACE	U.S. Army Corps of Engineers
USC	United States Code
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

This page intentionally left blank

CHAPTER 1 – PURPOSE AND NEED FOR ACTION

1.1 Background

The Tennessee Valley Authority Act of 1933, as amended, (TVA Act) confers on the Tennessee Valley Authority (TVA) broad authority related to the unified conservation and development of the Tennessee River Valley and surrounding area and directs that property in TVA's custody be used to promote the TVA Act's purposes. Shortly after its creation, TVA began a dam and reservoir construction program that required the purchase of approximately 1.3 million acres of land for the creation of 46 reservoirs within the Tennessee River Valley region (the Valley). Most of these lands are located underneath the water of the reservoir system or have since been sold by TVA or transferred to other state or federal agencies. Today, approximately 293,000 acres of land along TVA reservoirs are managed by TVA pursuant to the TVA Act. TVA manages these public lands to protect the integrated operation of the TVA reservoir and power systems, to provide for appropriate public use and enjoyment of the reservoir system, and to provide for continuing economic growth in the Valley. In order to systematically manage these reservoir lands, TVA develops land use plans to integrate land and water program goals, provide for optimum public benefit, and balance competing and sometimes conflicting resource uses. In managing public lands and resources under its authority, TVA also seeks to provide effective and efficient management of natural, cultural, visual, and recreation resources to meet all regulatory requirements and applicable guidelines.

An increasing demand for use of these remaining lands sometimes results in conflicting public opinions regarding the most appropriate use of individual parcels. These competing interests and development pressures, coupled with today's environmental awareness, underscore the necessity for a systematic and comprehensive planning approach to the management, retention, and disposal of reservoir lands managed by TVA. TVA began planning its reservoir lands in the 1940s and has implemented three different land planning methodologies for classifying reservoir lands since that time:

- Forecast System
- Multiple Use Tract Allocations
- Single Use Parcel Allocations

An effort to more clearly define and commit to suitable uses of reservoir lands was undertaken by TVA in 1999 using the Single Use Parcel Allocation method, which is still in use today. Similar to the Multiple Use Tract Allocation methodology, TVA-managed lands are subdivided into manageable parcels; however, under this methodology, each parcel is designated for a single use and allocated to a single zone designation. The seven zone designations under the Single Use Parcel Allocation are defined in Table 1-1.

Table 1-1. Land Use Zone Definitions

Zone	Definition
Zone 1 Non-TVA Shoreland	Shoreland that TVA does not own in fee. This land may be privately owned or owned by a governmental entity other than TVA. Uses of this non-TVA land may include residential, industrial, commercial, and/or agricultural. In many instances, TVA may have purchased the right to flood and/or limit structures on this non-TVA land (i.e., flowage easement). TVA's permitting authority under Section 26a of the TVA Act applies to construction of structures on non-TVA shoreland. Non-TVA shoreland allocations are based on deeded rights and, therefore, will not change as a result of the lands planning process. This category is provided to assist in comprehensive evaluation of potential environmental impacts of TVA's allocation decision. *Note, non-TVA shoreland is not represented in the Reservoir Land Management Plans (RLMP) because the parcels are private land.*
Zone 2 Project Operations	Land currently used or planned for future use, for TVA operations and public works projects, including: • Land adjacent to established navigation operations – Locks, lock operations and maintenance facilities, and the navigation work boat dock and bases. • Land used for TVA power projects operations – Generation facilities, switchyards, and transmission facilities and rights-of-way. • Dam reservation land – Areas acquired and managed for the primary purpose of supporting the operation and maintenance of TVA dams and associated infrastructure; secondary uses may also include developed and dispersed recreation, maintenance facilities, miscellaneous TVA field offices, research areas, and visitor centers. • Navigation safety harbors/landings – Areas used for tying off commercial barge tows and recreational boats during adverse weather conditions or equipment malfunctions. • Navigation dayboards and beacons – Areas with structures placed on the shoreline to facilitate navigation. • Public works projects – Includes rights-of-way for public utility infrastructure, such as sewer lines, water lines, transmission lines, and major highway projects.
Zone 3 Sensitive Resource Management	Land managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment. Recreational natural resource activities, such as hunting, wildlife observation, and camping on undeveloped sites, may occur in this zone, but the overriding focus is protecting and enhancing the sensitive resource the site supports. Areas included are: • TVA-designated sites with potentially significant archaeological resources. • TVA public land with sites/structures listed in or eligible for listing in the National Register of Historic Places. • Wetlands – Aquatic bed, emergent, forested, and scrub-shrub wetlands as defined by TVA. • TVA public land under easement, lease, or license to other agencies/individuals for resource protection purposes. • TVA public land fronting land owned by other agencies/individuals for resource protection purposes. • Habitat protection areas – These TVA natural areas are managed to protect populations of species identified as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS), state-listed species, and any unusual or exemplary biological communities/geological features.

Zone	Definition
	• Ecological study areas – These TVA natural areas are designated as suitable for ecological research and environmental education by a recognized authority or agency. They typically contain plant or animal populations of scientific interest or are of interest to an educational institution that would utilize the area. • Small wild areas – These TVA natural areas are managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural, scenic, or aesthetic qualities that can also support dispersed, low-impact types of outdoor recreation. • River corridor with sensitive resources present – A river corridor is a segment of a river and the adjacent land along the banks. River corridors often consist of a linear green space of TVA land serving as a buffer to tributary rivers entering a reservoir. These areas will be included in Zone 3 when identified sensitive resources are present. • Significant scenic areas – Areas designated for visual protection because of their unique vistas or particularly scenic qualities. • Champion tree site – Areas designated by TVA as sites that contain the largest known individual tree of its species in that state. The state forestry agency "Champion Tree Program" designates the tree, while TVA designates the area of the sites for those located on TVA public land. • Other sensitive ecological areas – Examples of these areas include heron rookeries, uncommon plant and animal communities, and unique cave or karst formations.
Zone 4 Natural Resource Conservation	Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Areas included are: • TVA public land managed for wildlife or forest management projects. • TVA public land under easement, lease, or license to other agencies for wildlife or forest management purposes. • TVA public land fronting land owned by other agencies for wildlife or forest management purposes. • Dispersed recreation areas maintained for passive, dispersed recreation activities, such as hunting, hiking, bird watching, photography, primitive camping, bank fishing, and picnicking. • Shoreline conservation areas – Narrow riparian strips of vegetation between the water's edge and TVA's back-lying property that are managed for wildlife, water quality, or visual qualities. • Wildlife observation areas – TVA natural areas with unique concentrations of easily observed wildlife that are managed as public wildlife observation areas. • River corridor without known sensitive resources present – A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. River corridors will be included in Zone 4 unless sensitive resources are known to be present (see Zone 3). • Islands where sensitive resources are not known to be present or that support existing development.

Zone	Definition
Zone 5 Industrial	Land currently used, or planned for future use, for economic development, including businesses in distribution/processing/assembly and manufacturing. Preference will be given for businesses requiring water access. There are two primary types of uses for TVA land allocated for Industrial: (1) access for water supply or structures associated with navigation such as barge terminals, mooring cells, etc., or (2) land-based development potential. Areas included are: • TVA public land under easement, lease or license to other agencies/individuals/ entities for industrial purposes. • TVA public land fronting land owned by other agencies/individuals/entities for industrial purposes. In some cases, TVA land allocated to industrial use would be declared surplus and sold at public auction. Types of development that can occur on this land are: • Industry – Manufacturing, fabrication, and distribution/processing/assembly involving chemical, electronics, metalworking, plastics, telecommunications, transportation, and other industries. Industry does not include retail or service-based businesses. • Industrial access – Access to the waterfront by back-lying property owners across TVA property for water intakes, wastewater discharge, or conveyance of commodities (i.e., pipelines, rail, or road). Barge terminals are associated with industrial access corridors. • Barge terminal sites – Public or private facilities used for the transfer, loading, and unloading of commodities between barges and trucks, trains, storage areas, or industrial plants. • Fleeting areas – Sites used by the towing industry to switch barges between tows or barge terminals that have both offshore and onshore facilities. • Minor commercial landing – A temporary or intermittent activity that takes place without permanent improvements to the property. These sites can be used for transferring pulpwood, sand, gravel, and other natural resource commodities between barges and trucks.

Zone	Definition
Zone 6 Developed Recreation	Land currently used, or planned for future use, for concentrated, active recreational activities that require capital improvement and maintenance of developed infrastructure, including: • TVA public land developed for recreational purposes, such as campgrounds, day use areas, etc. • TVA public land under easement, lease, or license to other agencies/individuals/entities for developed recreational purposes. • TVA public land fronting land owned by other agencies/individuals/entities for developed recreational purposes. Residential use, long-term accommodations, and/or individually owned units are not permitted on land allocated for developed recreation. Types of development that can occur on this land are: • Public recreation – Recreation amenities developed and owned by a public agency that are open to the public. Public recreation areas may have varying levels of development, ranging from a water access site (e.g., launching ramp) to a marina facility. Facilities at public recreation areas could include playgrounds/play structures, picnic facilities, tennis courts, horseshoe areas, play courts, recreation centers, trails, greenways, natural areas, amphitheaters, food concessions (vending, snack bar), access to water for fishing and boating, swimming areas and swimming pools, launching ramps, courtesy piers, canoe access, marina facilities owned by the public entity, parking, and campgrounds. Cabins or other overnight accommodations (other than campgrounds) are only permitted if the public recreation area is operated by a state or state agency as a component of a state park system. Public recreation areas and facilities are typically owned and operated by the federal, state, county, or local government. However, private entities may operate recreation facilities on public recreation land as concessionaires under agreement with the public entity controlling the property. The use of the facilities may be offered free or for a fee. Time-forward, public-private partnerships where facilities are owned by private investors will not be approved on public recreation land. All structures and facilities should be owned by the public entity. • Commercial recreation – Recreation amenities that are provided for a fee to the public intending to produce a profit for the private owner/operator. These primarily water-based facilities typically include marinas and affiliated support facilities such as stores, restaurants, campgrounds, and cabins and lodges. Where applicable, TVA will require appropriate compensation for the commercial use of the property.
Zone 7 Shoreline Access	TVA-owned land where Section 26a applications and other land use approvals for residential shoreline alterations are considered in accordance with TVA's Shoreline Management Policy. Types of development/management that may be permitted on this land are: • Residential water use facilities (e.g., docks, piers, launching ramps/driveways, marine railways, boathouses, enclosed storage space, and nonpotable water intakes). • Shoreline access corridors (e.g., pathways, wooden steps, walkways, or mulched paths that can include portable picnic tables and utility lines). • Shoreline stabilization (e.g., bioengineering, riprap, gabions, and retaining walls). • Shoreline vegetation management.

In order to create a consistent reservoir lands planning methodology across the Valley, TVA evaluated each of the reservoirs that have Forecast System designations or Multiple Use Tract Allocations for conversion to the Single Use Parcel Allocation methodology. In 2006, TVA began using the Rapid Lands Assessment (RLA) tool to preliminarily assess which Single Use Parcel Allocation would be appropriate for each parcel which had previously been given a designation under the Forecast System or an allocation under the Multiple Use Tract Allocation methodology. Although the official designations and allocations of the parcels are not altered by the RLA, the process allows TVA to compare reservoir lands across the Valley under a single allocation model. The information obtained from RLA provides acreage estimates of lands managed in the various zones and allocations, and is used for planning and analysis purposes only as the TVA Board of Directors until the formal land plans were completed.

In 2011, the TVA Board of Directors accepted TVA's Natural Resource Plan (NRP) and authorized the Chief Executive Officer to implement the NRP to guide TVA's natural resource management in the areas of biological, cultural, and water resources management, recreation management, public engagement, and reservoir lands planning. As part of the NRP, TVA adopted the Comprehensive Valleywide Land Plan (CVLP) to guide use of TVA-managed property on 46 reservoirs. In the NRP, TVA established CVLP target ranges for each land use zone based on existing land plans and on RLAs. These ranges are targets within which TVA intends to maintain a desired balance of shoreline development, recreational use, sensitive and natural resource management, and other uses. The CVLP and its targets enable TVA and the public to consider those allocations across the reservoir system and determine whether too much or too little attention is being given to particular land uses on a system-wide basis.

1.2 Description of the Proposed Action

TVA has developed reservoir land management plans (RLMPs) to facilitate the management of TVA-managed public lands surrounding the eight reservoirs located in Alabama, Kentucky, and Tennessee shown on Figure 1-1. All lands under TVA management on these eight reservoirs, a total of approximately 138,300 acres, are under consideration in this planning process. The eight RLMPs would guide land use approvals, private water use facility permitting, and resource management decisions on TVA-managed public land around these facilities.

Land acquisition and disposal information for the eight reservoirs is presented in Table 1-2. The acreages listed in the table were calculated from georeferenced mapping data and aerial photography of the reservoir land parcels and do not completely align with acreage totals in recorded deeds. The acreages also do not include land acquired and retained that is below the full summer pool elevations of the reservoirs. These acreages also do not include other lands located off-reservoir and acquired by TVA for operation of the power system (e.g., transmission line rights-of-way, substations).

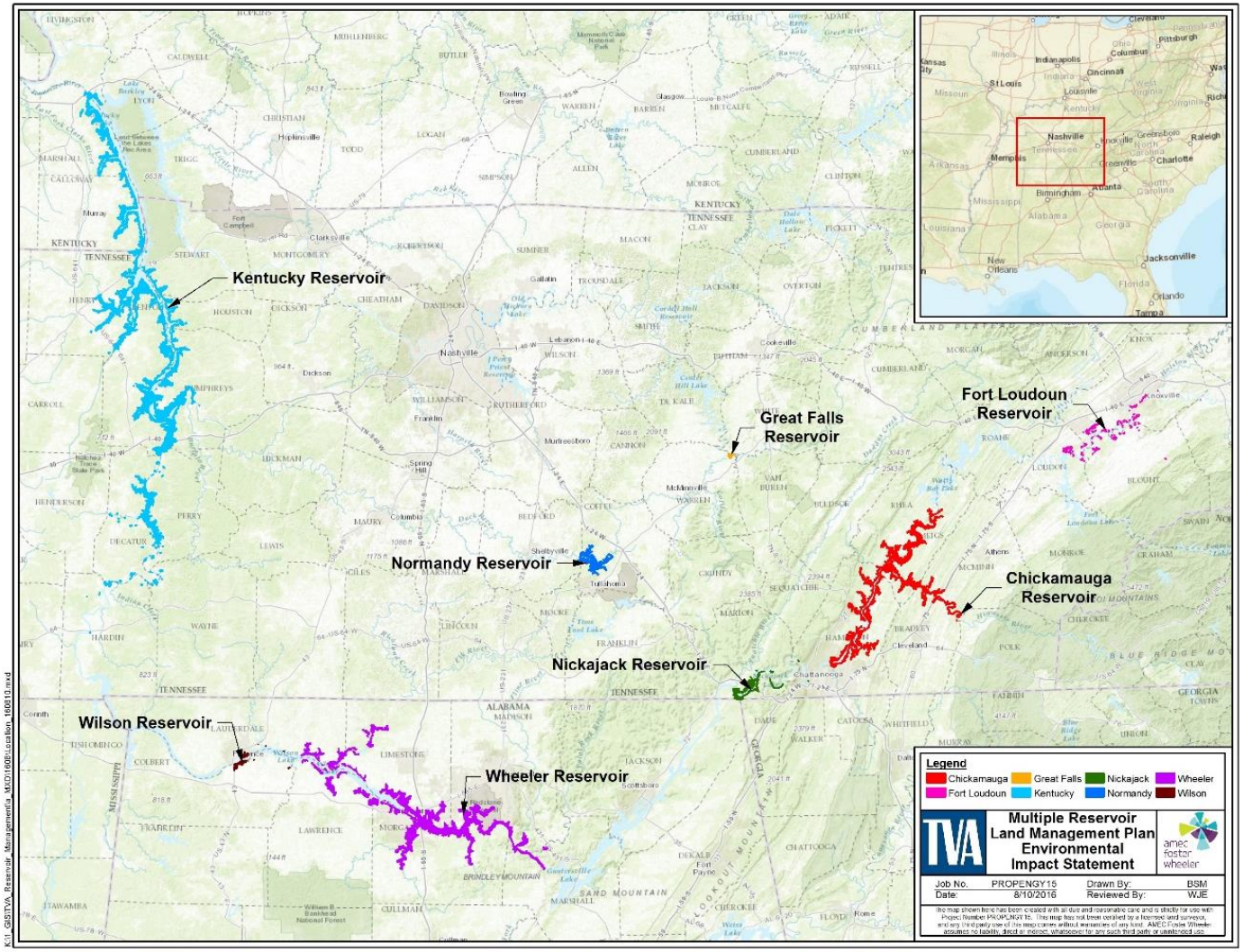


Figure 1-1. Location of Chickamauga, Fort Loudoun, Great Falls, Kentucky, Nickajack, Normandy, Wheeler and Wilson Reservoirs

Table 1-2. Land Acquisition and Disposal Data

Reservoir	Location (County, State)	Total Land Originally Acquired Above Pool Elevation (Acres)	Total Lands Disposed (Transferred or Sold) (Acres)	Percent of Original Acquisition (Above Pool Elevation) Sold or Transferred	TVA- Retained (Acres)
Chickamauga	Bradley, Hamilton, McMinn, Meigs, Polk, and Rhea, Tennessee	33,607	17,545	52	16,061
Fort Loudoun	Loudon, Blount, and Knox, Tennessee	2,789	1,278	46	1,513
Great Falls	Warren and White, Tennessee	8,000	7,638	95	362
Kentucky	Livingston, Lyon, Calloway, and Trigg, Kentucky and Humphreys, Benton, Decatur, Hardin, Wayne, Henry, Henderson, Perry, Stewart, Houston, and Carroll, Tennessee	91,785[1]	25,340	28	74,713[1]
Nickajack	Marion and Hamilton, Tennessee	4,533	928	20	3,605
Normandy	Bedford and Coffee, Tennessee	4798.0	0	0	4,798
Wheeler	Lauderdale, Lawrence, Limestone, Madison, Marshall, and Morgan, Alabama	62,376[1]	26,332	42	36,044[1]
Wilson	Lauderdale and Colbert, Alabama	1,630[2]	407	25	1,223
Total		**209,517**	**79,466**	**38**	**138,321**

Acreages are approximate.
[1] Includes flood prone areas supporting dewatering units.
[2] Designated in the 1996 Muscle Shoals/Wilson Dam Reservation Land Use Plan (TVA 1996).

1.3 Purpose and Need

The purpose of the proposed RLMPs is to bring consistency to the land planning process across the eight reservoirs considered in this Environmental Impact Statement (EIS) and apply a systematic method of evaluating and identifying the most suitable uses of TVA public lands in furtherance of TVA's responsibilities under the TVA Act. The proposed

RLMPs are designed to guide land use approvals, private water use facility permitting, and resource management decisions on the eight reservoirs. The planning team would use the proposed RLMPs along with TVA policies and guidelines to manage resources and respond to requests for the use of TVA public land. In the land planning process, TVA would allocate public lands and land rights to one of seven land use zones (see Table 1-1) established by TVA to allocate each parcel of land to a single zone designation. The RLMPs also support compliance with federal regulations and executive orders, and helps ensure the protection of significant resources, including threatened and endangered species, cultural resources, wetlands, unique habitats, natural areas, water quality, and the visual character of the reservoirs.

In November 2006, the TVA Board of Directors approved the TVA Land Policy (Appendix A) to govern the retention, disposal, and planning of interests in real property. This policy provides for the continued development of RLMPs for reservoir properties with substantial public input and with approval of the TVA Board of Directors. An updated RLMP is needed to make land planning on these eight reservoirs consistent with the TVA Land Policy and the CVLP and to incorporate TVA's goals for managing natural resources on public lands. RLMPs are submitted to the TVA Board of Directors for approval and provide a plan for long-term land stewardship and accomplishment of TVA's responsibilities under the TVA Act. Additional information about land planning goals is provided in Chapter 3 for the individual RLMPs that are included in this EIS as Volumes II through IX.

Updated RLMPs are also needed to make land planning on these eight reservoirs consistent with TVA's goals for managing natural resources on public lands. In managing its public lands and resources, TVA seeks to provide efficient resource stewardship that is responsive to stakeholder interests. TVA intends to manage its public land for an optimum level of multiple uses and benefits that protect and enhance natural, cultural, recreational, and visual resources in a cost-effective manner. Through this approach, TVA ensures that resource stewardship issues and stakeholder interests are considered while optimizing benefits and minimizing conflicts. TVA recognizes that the management or use of one resource affects the management or use of others; therefore, an integrated approach is more effective than considering resources individually. In managing public lands and resources under its authority, TVA seeks to:

- Provide effective and efficient management of natural, cultural, visual, and recreation resources to meet all regulatory requirements and applicable guidelines.
- Apply an integrated, proactive approach to natural resource management that balances the competing interests of stakeholders, while conserving and enhancing natural, cultural, visual, and recreation resources.
- Ensure the availability of quality, affordable public outdoor recreation opportunities.
- Manage resources in a cost-effective manner.

1.4 Structure of the Multiple Reservoir Land Management Plan EIS

Volume I of this EIS is the document that demonstrates compliance with the National Environmental Policy Act (NEPA), 42 United States Code (USC) Section (§) 4321 et seq., to address the potential environmental impacts of implementing the eight RLMPs. Volume I of the EIS includes the project purpose and need, description of alternative actions (including a summary of each RLMP), overview of the affected environment, analyses of environmental consequences, and other elements associated with the NEPA process. The eight individual RLMPs are found in Volumes II through IX. The RLMPs contain detailed

descriptions of the environment around each reservoir and descriptions of each parcel of land addressed in the plans. Once TVA finalizes the EIS, these individual volumes will serve as the RLMP for each of the eight reservoirs.

1.5 The Decision

The TVA Board of Directors will decide which of the alternatives to adopt for the planning and management of TVA-controlled public land around the eight reservoirs considered in the document.

1.6 Other Pertinent Environmental Reviews or Documentation

Reservoir Operations Study Final Programmatic Environmental Impact Statement (TVA 2004)

The Reservoir Operations Study evaluated alternative ways to operate the TVA reservoir system to produce greater overall public value. Specific changes in the operation of TVA reservoirs were implemented in 2004 because of this study. Some of these changes apply to the eight reservoirs considered in this document. These operational changes are reflected in the following implemented procedures:

- TVA adheres to the established schedule for filling of the reservoir during the first week in April for Fort Loudoun and Chickamauga reservoirs, then delays the fill to reach summer operating zone by mid-May.
- TVA maintains base case summer operating zones through Labor Day for Chickamauga and Wheeler reservoirs.
- TVA fills the Great Falls Reservoir to summer pool by Memorial Day.
- TVA raised the minimum winter pool elevation by 0.5 foot at Wheeler Reservoir.
- To better ensure an 11-foot minimum depth in the navigation channel, steady water releases are provided as necessary at Kentucky Dam to maintain a tailwater elevation of 301 feet.
- The weekly average system flow requirement from June 1 through Labor Day measured at Chickamauga Dam is determined by the volume of water in storage at 10 upstream tributary reservoirs.

Shoreline Management Initiative (SMI): An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley Final Environmental Impact Statement (TVA 1999)

In 1998, TVA completed the SMI EIS analyzing possible alternatives for managing residential shoreline development throughout the Tennessee River Valley. The selected Shoreline Management Policy (SMP) defines the standards for vegetation management, docks, shoreline stabilization, and other residential shoreline alterations. Across the TVA reservoir system, approximately 38 percent of the total shoreline is available for residential development, and a third of that shoreline had been developed by the mid-1990s.

The eight RLMP EIS tiers from the final SMI EIS concerning the categorization and management of TVA-owned shoreline access land along the eight reservoirs. TVA-owned shoreline access land comprises 630 miles, or approximately 13 percent, of the total 4,676 miles of TVA shoreline on the eight reservoirs. A detailed description of individual reservoirs can be found in Section 3.1. In accordance with TVA's SMP, TVA has traditionally categorized the residential shoreline for previous land plans based on resource

data collected from field surveys. During development of the SMI EIS, a resource inventory was conducted for sensitive species and their potential habitats, archaeological resources, and wetlands along the residential shoreline. The shoreline categorization system established by the SMP was composed of three categories: Shoreline Protection, Residential Mitigation, and Managed Residential. In its RLMPs, TVA identifies which parcels are to be managed for Shoreline Access (Zone 7). However, TVA does not identify in the RLMP whether the shoreline access parcels are to be managed for Shoreline Protection, Residential Mitigation, or Managed Residential.

Floating Houses Policy Review Final Environmental Impact Statement (TVA 2016a)

In 2016, TVA completed an EIS to assess the environmental, safety, and socioeconomic concerns associated with the proliferation of floating houses (FHs) and non-navigable houseboats (NNs) on its reservoirs. Section 26a of the TVA Act provides TVA jurisdiction to regulate obstructions that affect navigation, flood control or public lands across, along, or in the Tennessee River or any of its tributaries. In 1971, TVA amended its 26a regulations to prohibit the mooring or anchoring of new NNs on TVA reservoirs. In 1978, the rules for NNs were clarified to better distinguish between navigable and non-navigable structures, and the prohibition was carried forward. FHs are a modern version of the NNs that TVA addressed in its 1971 and 1978 regulatory actions but do not have permits issued by TVA. Based on the EIS, the TVA Board decided in May 2016 to implement a new policy for managing FHs and NNs that would permit existing structures that meet minimum standards to be moored within permitted marina harbor limits. However, all NNs and FHs must be removed from TVA reservoirs by the end of a 30-year sunset period. The geographic scope of this EIS is the entire Tennessee River Watershed, specifically TVA's reservoir system and adjacent shoreline and land. Particular attention is given to reservoirs with existing commercial marinas and those reservoirs with a reasonable potential to support commercial marinas in the future including Chickamauga, Fort Loudon, Kentucky, Nickajack, Normandy, Wheeler, and Wilson reservoirs.

Natural Resource Plan and Final EIS (TVA 2011a)

TVA developed the NRP (TVA 2011a) to guide its natural resource stewardship efforts. The NRP addresses TVA's management of biological, cultural and water resources, recreation, reservoir lands planning, and public engagement. The NRP's goal is to integrate the objectives of these resource areas, provide for the optimum public benefit, and balance sometimes conflicting resource uses. In developing the NRP, TVA completed an EIS (TVA 2011a), which describes the potential resource management programs and activities; alternative approaches to TVA's resource management efforts; and the environmental impacts of the alternatives, including the alternative comprising the NRP.

As part of the NRP, TVA developed a CVLP with target ranges for each land use zone that TVA uses to guide resource management and administration decisions on the approximately 293,000 acres of TVA-managed property around 46 reservoirs. The eight RLMPs EIS will be used to update the CVLP and inform the next NRP update.

Muscle Shoals/Wilson Dam Reservation Land Use Plan Environmental Assessment (TVA 1996) and Muscle Shoals Reservation Redevelopment Final Environmental Impact Statement (TVA 2011b)

TVA prepared the 1996 Environmental Assessment (EA) to evaluate approximately 3,036 acres of land on the Muscle Shoals and Wilson Dam Reservation to identify areas that would be made available for external uses. Approximately 12 acres were allocated for non-TVA regional economic development opportunities. The remaining acreage was allocated to TVA use, including land allocated to recreational use that is included within the current scope of the Wilson Dam RLMP. Approximately 1.7 acres of land on the reservation were sold consistent with the 1996 Plan.

The 2011 EIS documented the potential environmental effects of the proposed sale of 1,400 acres of land on the reservation. TVA subsequently identified 400 acres of land that should be retained by TVA due to ongoing TVA business needs and limited development opportunities due to prior industrial operations.

As part of the land planning process analyzed in this EIS, TVA evaluated the non-reservoir property designation and allocations from the 1996 Plan for the remaining approximately 1,630 acres of property on the reservation. As a result of this analysis, 1,223 acres of property were considered reservoir property and are included within the scope of the Wilson RLMP. Additional information regarding this process is found in Section 2.2 of the Wilson RLMP.

Kentucky Reservoir Land Management Plan (TVA 1985)

TVA prepared the Kentucky RLMP in 1985 to guide TVA resource management and property administration decisions on 41,686 acres of TVA land on Kentucky Reservoir. The lands were subdivided into 275 parcels and assigned appropriate multiple-use designations from a set of the following categories: wildlife management, forest management, recreation, cultural resources management, agriculture, navigation, visual protection, open space, special management areas and industrial sites. The planned acreage includes all TVA retained land except TVA power properties, Land Between The Lakes, marginal strip lands, and other TVA land affected by permanent or long-term easements. Kentucky RLMP was the third RLMP to be approved by the TVA Board of Directors.

Chickamauga, Kentucky, Nickajack, and Wheeler reservoirs were planned under the Multiple Use Tract Allocation methodology and these RLMPs did not include land committed to a long-term or permanent uses such as tracts encumbered by easements or property used for TVA dam reservations or power plants. Further, the narrow strips of TVA-managed land (known as marginal strips) that fronts property that TVA had previously sold or transferred were not included under this planning methodology in these four RLMPs.

Chickamauga Reservoir Land Management Plan (TVA 1989)

The Chickamauga RLMP was the sixth land management planning project to be initiated by TVA. The 1989 RLMP presented reservoir-specific management objectives including the following: providing for a diversity of quality recreation opportunities; promoting economic development; protecting the amenities and environmental quality of the reservoir and reservoir land; protecting and enhancing the forestry, fisheries, and preserving agricultural resources. The RLMP considered 9,913 acres of TVA land subdivided into 153 parcels and

assigned multiple-use designations. The planned acreage is TVA fee-owned land and accounts for 237 miles (29 percent) of the total 810 miles of reservoir shoreline. As described above, other shoreline is not addressed in the RLMP.

Nickajack Reservoir Land Management Plan (TVA 1990)

TVA prepared the Nickajack RLMP to guide TVA land management decisions on 3,171 acres subdivided into 153 parcels and assigned appropriate multiple-use designations to guide land use on Nickajack. The plan identifies the most suitable use(s) for the land and provides sites for a variety of economic development, recreation development, and resource management purposes. The planned acreage is TVA fee-owned land and accounts for 30 miles (16 percent) of the total 192 miles of reservoir shoreline. As described above, other shoreline is not addressed in the RLMP. The TVA Board of Directors approved the final Nickajack RLMP in January 1990.

Wheeler Reservoir Land Management Plan (TVA 1995)

TVA prepared the Wheeler RLMP to guide TVA land management decisions on 11,284 acres of land around Wheeler Reservoir that are under TVA stewardship and control. It identifies the most suitable uses for 203 parcels of TVA public land, providing sites for recreation, industry, navigation, wildlife and forest management, cultural and environmental preservation, and agriculture. The planned acreage is TVA-retained (fee-owned) land and accounts for 335 miles (31 percent) of the total 1,063 miles of reservoir shoreline. The remaining 69 percent of shoreline is not addressed in the RLMP. The TVA Board of Directors approved the final Wheeler RLMP in 1995.

1.7 The Scoping Process

Scoping, which is integral to the process for implementing NEPA, is a procedure that solicits public input to the NEPA process to ensure that: (1) issues are identified early and properly studied; (2) issues of little significance do not consume substantial time and effort; (3) the NEPA document is thorough and balanced; and (4) delays caused by an inadequate review are avoided. TVA's NEPA procedures require that the scoping process commence soon after a decision has been reached to prepare a NEPA review in order to provide an early and open process for determining the scope and for identifying the significant issues related to a proposed action.

TVA determined that the development of an EIS would allow for a better understanding of the impacts of the proposed land use implementation. Accordingly, on March 3, 2016, TVA published in the Federal Register a notice of intent (NOI) to prepare an EIS and initiated scoping for the proposal.

TVA's action would satisfy the requirements of Executive Order (EO) 11988 (Floodplains), EO 13112 (Invasive Species), and EO 13653 (Preparing the United States for the Impacts of Climate Change), EO 11990 (Protection of Wetlands), EO 12898 (Environmental Justice), and applicable laws including the National Historic Preservation Act (NHPA), Endangered Species Act (ESA), Clean Water Act (CWA), and Clean Air Act (CAA).

1.7.1 Scoping and Public Involvement

In addition to publishing an NOI in the Federal Register, TVA notified the public of the initiation of the planning process in a variety of ways. TVA published information about the review and planning effort on the TVA webpage, notified the media, and sent notices to

numerous individuals, organizations, and intergovernmental partners with information about the review.

TVA established a project website as the primary platform for public outreach. The project Web site (https://www.tva.gov/landplansreview) is intended to serve as the primary hub for distributing information to the public. Visitors to the page can navigate from the project Web site to other web sites for additional information pertaining to the proposed RLMP for each of the eight reservoirs. During the scoping period, the Web page directed the public to submit scoping comments via email or mail.

The NOI initiated a 30-day public scoping period, which concluded on April 4, 2016. TVA prepared a Scoping Report to summarize its outreach efforts and the input that was received from the public and other agencies during the scoping period (the report is available on the project's website).

1.7.2 Scoping Response

TVA received a total of 51 submissions from members of the public and intergovernmental entities (50 email or online comment form submittals and one mailed letter). Among the 51 submissions, 40 were from members of the public and 11 were from state or federal entities. The comments received during the public scoping period are presented in the Scoping Report.

Three predominant themes were identified from the comments provided: protection of natural resources, recreation resources and TVA stewardship. Five individuals identified concerns relating to specific TVA parcels on Fort Loudoun, Kentucky, Nickajack, Normandy and Wheeler reservoirs. Among the 51 submissions, 24 individuals provided comments pertaining to Normandy Reservoir. Of these comments, 19 requested that TVA allow horseback riding on TVA lands on Normandy. Two commenters urged TVA to protect the Short Springs Natural Area and not to consider a proposal by the Tennessee Duck River Development Agency to raise the dam.

TVA received comments from several state entities, including the Tennessee Wildlife Resources Agency (TWRA), the State Historic Preservation Officers (SHPO) of Alabama, Kentucky, Virginia and Georgia, and the Tennessee Duck River Development Agency. Each SHPO expressed interest in the project and a desire to formally consult under the NHPA. The USFWS comments urged TVA to continue to manage lands around several of the eight reservoirs to promote conservation of specific sensitive species and requested that TVA consider migratory bird species during its planning effort and environmental review. The National Park Service expressed interest in the planning effort and concern for the potential impacts on sections of the Trail of Tears National Historic Trail. The Tennessee Duck River Development Agency, a regional development agency established by the state of Tennessee, expressed its interest in long-term water supply needs in the region and operations of Normandy Reservoir.

1.7.3 Issue and Resource Identification

This EIS is a programmatic document that addresses the proposed implementation of eight RLMPs, which would allocate TVA-managed lands to the appropriate land use zone. This EIS also evaluates potential impacts associated with the various types of uses permitted under each zone. The proposed eight RLMPs do not include specific projects, such as developing campgrounds or industrial sites, and effects of such projects are not evaluated in this programmatic review. Whenever such individual projects are proposed in the future,

TVA will determine the need for permits, coordination with other agencies (e.g., SHPO, USFWS and others), and the appropriate level of NEPA review and documentation. Additionally, this programmatic review does not address the operation of existing facilities, such as dams, electrical substations, or visitor centers, nor does it address the management of water levels in the reservoirs, which was evaluated in TVA's Reservoir Operations Study.

TVA internal reviews of current and historical information, reservoir data collected, and public input were used to identify the following resources/issues for evaluation in this EIS. The effects of implementing each alternative were evaluated with respect to the following issues:

Land Use and Prime Farmland – Existing land use patterns along the shoreline and back-lying land have been determined on most parcels by TVA land acquisition, disposals, and land use agreements. About 55 percent of the parcels are committed to existing land uses with little to no potential for change of those land uses. Proposed allocations of the remaining uncommitted parcels were evaluated using the goals of the individual RLMPs and TVA policies and regulations. TVA will comply with the 1981 Farmland Protection Policy Act.

Recreation – Existing developed (public or commercial) recreation facilities available to meet public needs were identified, as were those lands that are important for dispersed recreation (e.g., hunting, bank fishing, bird watching, hiking, etc.). The effects of implementing each alternative on recreation opportunities in the vicinity of the reservoirs included in this plan were evaluated.

Terrestrial Ecology – Terrestrial plant and animal communities found adjacent to the eight reservoirs included in this plan were characterized using existing databases. Issues include the identification and protection of significant natural features, rare species habitat, important wildlife habitat, or locally uncommon natural community types. TVA will be consistent with EO 13186 and EO 13112 on migratory birds and invasive species.

Aquatic Ecology – TVA characterized the aquatic plants and animals found in the waters of the reservoirs. TVA identified habitat for rare species, important aquatic habitat, or locally uncommon aquatic community types. The effect of implementing each alternative on aquatic ecology was evaluated.

Threatened and Endangered Species – TVA identified plants and animals that are state-listed or federally listed, proposed for listing, or candidates for listing as threatened and endangered, and are known to or are likely to exist in the vicinity of the eight reservoirs included in this plan. The presence of potentially suitable habitat within the TVA parcels was discussed for these species. The effect of implementing each alternative on threatened and endangered species was evaluated. TVA will comply with the ESA, the Bald and Golden Eagle Protection Act, and similar state laws.

Water Quality – TVA described water quality conditions within the eight reservoirs, based upon the Reservoir Ecological Heath Monitoring Program or similar indices, as well as state classifications and advisories. The effect of implementing each alternative on water quality in the reservoirs was evaluated.

Wetlands – Wetlands on TVA land along the reservoir shorelines were identified. TVA will comply with EO 11990 on wetlands and the CWA. The effects of implementing each alternative on wetlands on the reservoirs included in this plan was evaluated.

Floodplains – Floodplains on TVA land along the reservoir shorelines were identified. TVA will comply with EO 11988 on floodplains. The effects of implementing each alternative on floodplains on the reservoirs included in this plan was evaluated.

Air Quality and Climate Change – Compliance with National Ambient Air Quality Standards (NAAQS), which establish safe concentration limits of various air pollutants, was evaluated.

Cultural and Historic Resources – Prehistoric or historic districts, known sites, buildings, structures, or objects on or near the TVA lands around the reservoirs were identified. TVA will comply with Section 106 of the NHPA. The effects of implementing each alternative on cultural resources on the reservoirs included in this plan was evaluated.

Natural Areas and Ecologically Significant Sites – TVA identified special and unique natural areas on or in the vicinity of the eight reservoirs. The potential effect of implementing each alternative on these areas was evaluated.

Aesthetics and Visual Resources – The aesthetic settings of the reservoirs were characterized, and scenic and distinctive areas frequently seen by reservoir users and adjacent reservoir residents were identified. The potential effect of implementing each alternative on the natural beauty of the shoreline was evaluated.

Noise – The potential for nuisance noises to be generated under each alternative was examined.

Socioeconomics – The current population, labor force, employment statistics, and income, of the population within the region of the reservoirs were identified. A subset of these issues is environmental justice, the potential for disproportionate impacts to minority and low-income communities. The effect of implementing each alternative on socioeconomics was evaluated.

1.8 Public Review Process

TVA's public and agency involvement for the draft EIS includes publication of a public notice and a 60-day public review of the draft EIS. To solicit public input, the availability of the draft EIS was announced in regional and local newspapers. A news release was issued to the media, and posted to the TVA's Web site. The document was posted on TVA's Web site, and hard copies were made available by request. TVA's agency involvement includes sending notices to local, state and federal agencies and federally recognized tribes to inform them of the availability of the draft EIS. A list of agencies and tribes notified of the availability of the draft EIS is provided in Chapter 6.

Once the public and other agencies have reviewed and provided comments on the document, TVA will make revisions, if necessary, and issue a Final EIS. TVA will not make final decisions any earlier than 30 days after the Notice of Availability of the Final EIS is published in the Federal Register.

1.9 Required Permits and Consultation

No federal permits are required to develop an RLMP. Site-specific information on reservoir resources has been characterized in this EIS, and potential impacts on these resources were considered in making land use allocation recommendations. When specific actions are proposed on TVA parcels addressed in the RLMPs, additional environmental reviews for these actions would be undertaken as necessary to address potential project specific impacts.

Appropriate agencies and offices regulating historic resources and endangered species have been consulted during this planning process. TVA will comply with the NRP Programmatic Agreement executed in 2011 in consultation with the SHPO from the seven states, the Advisory Council of Historic Preservation and federally recognized Indian tribes which subsumes and governs all past and future land plans. TVA will complete necessary consultation with the USFWS under Section 7 of the ESA.

This page intentionally left blank

CHAPTER 2 – ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 Development of Alternatives

TVA proposes to implement individual RLMPs for public lands surrounding eight reservoirs within the TVA service area. The RLMPs would be used to guide land use approvals, private water use facility permitting, and resource management decisions on TVA-managed public land around these reservoirs. TVA developed two alternatives to be evaluated in this EIS. These are:

- Alternative A – No Action Alternative.
- Alternative B – Proposed Land Use Plan Alternative.

Regardless of the alternative selected, the following conditions would apply:

- Any proposed development or activity on public land will be subject to TVA approval pending the completion of an additional site-specific environmental review to evaluate the potential environmental effects of the proposal. As necessary, TVA would impose any necessary mitigative measures as conditions of approval for the use of public lands to minimize adverse environmental effects.
- Future activities and land uses will be guided by the TVA Act and TVA's Land Policy, SMP, NRP and CVLP.
- TVA land use allocations are not intended to supersede deeded land rights or landownership.

2.2 Property Administration

In the eight proposed RLMPs, each tract of TVA land around the reservoirs is categorized based upon a suitable use that is consistent with TVA policies and guidelines and applicable laws and regulations. Property administration procedures for all TVA lands are generally the same for both alternatives under consideration. As administrators of these public lands, TVA will use the eight RLMPs, along with TVA policies and guidelines, to manage resources and to respond to requests for the use of TVA public land.

Pursuant to the TVA Land Policy (Appendix A), TVA would consider changing a land use designation outside of the normal planning process (preparation of RLMPs) only for the purpose of water access for industrial or commercial recreation operations on privately owned back-lying land, or to implement TVA's SMP.

Additionally, there are some TVA parcels in the Tennessee Valley that have deeded access rights for shoreline access that are currently utilized for uses such as commercial recreation. Should the private back-lying land become residential, a request for a change of allocation of the TVA shoreline parcel to Zone 7 (Shoreline Access) would be subject, with appropriate environmental review, to action by the TVA Board of Directors. There are parcels in the eight RLMPs over which the private back-lying property owners currently have deeded access rights that are not allocated to Zone 7.

Consistent with the TVA Land Policy, those parcels or portions of parcels that have become fragmented from the reservoir may be declared surplus and sold at public auction under certain circumstances. For example, Parcel 249 on Chickamauga Reservoir, which is approximately 2.2 acres in size, is fragmented from the reservoir and has been identified in

the RLMP as a candidate for surplus or easement for interstate expansion. In addition, five parcels on Wheeler Reservoir were recommended for surplus and disposal in the previous RLMP for this reservoir (TVA 1995).

Public works/utility projects such as easements for pipelines, power or communication wires, roads or other public infrastructure proposed on any TVA public land that do not affect the zoned land use or known sensitive resources would not require an allocation change as long as such projects are compatible with the use of the allocated zone. For example, a proposed construction of a water intake structure would be compatible with a reservoir parcel allocated for Zone 4 (Natural Resource Conservation) provided natural resource conservation activities could continue. Proposed public works/utility projects would be subject to a project-specific environmental review. Any other requests involving a departure from the planned uses would require the approval of the TVA Board of Directors.

Proposals consistent with TVA's policies and the allocated use, and otherwise acceptable to TVA, will be reviewed in accordance with NEPA and must conform to the requirements of other applicable environmental regulations and other legal authorities.

2.3 Alternative A – No Action Alternative

Under Alternative A, TVA would not implement new RLMPs for the eight reservoirs. TVA would continue to manage the TVA land on the Fort Loudoun and Normandy reservoirs under allocations made using the Forecast System and would continue to manage the TVA land on Chickamauga, Kentucky, Nickajack, and Wheeler reservoirs in accordance with existing RLMPs, which were developed using the Multiple Use Tract Allocation methodology. Wilson and Great Falls reservoirs were not previously planned, and therefore would be subject to management in accordance with existing commitments and land use agreements as well as the TVA SMP and Land Policy.

Among the eight reservoirs for which TVA is proposing RLMPs, six were planned using different methodology and land use categories than is currently used. Before 1979, when TVA began the comprehensive planning of its reservoir lands in a public forum, the Forecast System methodology was used to guide land use decisions on most TVA reservoir lands. Two reservoirs (Fort Loudoun and Normandy) were planned in the 1960s or 1970s and are still using TVA's Forecast System. The Forecast System was an in-house process that documented actual and prospective uses for all TVA public land around a reservoir using a somewhat variable set of designations. The Forecast System allocated land into 13 categories that among others, included: Dam Reservation, Powerhouse Reservation, Public Recreation, Agricultural Research, Industry, Construction and Maintenance, Reservoir Operations, and Commercial Recreation. The Forecast System designations are described in Appendix B.

In 1979, TVA began using the Multiple Use Tract Allocation method, which was a systematic approach to planning reservoir lands for multiple uses. Four reservoirs (Chickamauga, Kentucky, Nickajack, and Wheeler) were planned in the 1980s and 1990s under the Multiple Use Tract Allocation methodology. Land uses under this planning method are allocated as follows: Wildlife Management, Forest Management, Recreation, Cultural Resources Management, Agriculture, Navigation, Visual Protection, Open Space, and Special Management. TVA has never developed a RLMP for Great Falls Reservoir, and only a portion of Wilson Reservoir has been planned.

Under the No Action Alternative, TVA would not take any action to align or complete plans on the TVA managed lands on the eight reservoirs. In the case of the six reservoirs for which RLMPs were previously completed, parcels would continue to be managed in accordance with their existing plan and would continue to be based on different planning methodologies with differing allocations. Great Falls and Wilson reservoirs would continue to be unplanned. Under this alternative, TVA would not comply with the TVA Board's directive to bring its CVLP allocations up-to-date to reflect the allocations determined under the Single Use Parcel Allocation methodology and complete alignment with existing policies would not occur.

Proposed land use requests received from external applicants or internal TVA organizations would be evaluated for consistency with the existing land use agreements, TVA policies, and/or the Forecast System or Multiple Use Tract Allocation methodologies, which may not incorporate current data on land conditions, adjacent uses, or other resources. If the request were not consistent with the previously planned land use, formal approval by the TVA Board of Directors or its designee, following appropriate review, would be required to change the land use designation.

To facilitate the comparison of alternatives, the existing land use designations for the reservoirs have been converted to the equivalent designation of one of the seven proposed land use zones (Table 2-1). For example, a parcel with a Forecast System designation of Dam Reservation would be converted to Zone 2 (Project Operations). In situations where a parcel contained more than one land use designation the existing land use determined which zone allocation was selected. In some cases, a parcel with multiple land uses was split in order to allocate the varying uses to the compatible zone. The conversions are identified for individual parcels on each reservoir in Appendix C, and the converted designations are used in many of the discussions below.

Table 2-1. Area by Equivalent Current Land Use Designations by Reservoir

Reservoir	Equivalent Allocation Designation (Acres)						
	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Total
Chickamauga	1,235.7	5,562.6	6,646.6	178.8	762.6	1,675.3	**16,061.4**
Fort Loudoun[1]	403.4	36.9	237.5	34.6	676.3	61.7	**1,450.4**
Great Falls	19.0	0	0	0	343.4	0	**362.4**
Kentucky	785.6	1,289.2	62,642.7	1,249.9	4,259.9	4,486.2	**74,713.5**
Nickajack[1]	619.8	1,025.3	1,787.0	79.2	89.5	0	**3,600.8**
Normandy[1]	641.6	720.2	3,229.4	0	190.6	13.1	**4,794.9**
Wheeler	4,427.3	6,945.4	22,447.8	495.2	1,594.1	135.2	**36,045.2**
Wilson	1,072.1	0	0	0	148.5	2.8	**1,223.4**
Total	**9,204.6**	**15,579.6**	**96,991.0**	**2,037.6**	**8,064.9**	**6,374.2**	**138,252**

[1] Does not include parcels or a portion of parcels that were not previously planned.

2.4 Alternative B – Proposed Land Use Plan Alternative

Under the Proposed Land Use Plan Alternative, eight RLMPs would be developed to identify land use zones in broad categories. The plans would be based on current land usage, existing land rights (i.e., committed lands), public needs, the presence of known sensitive resources and TVA policies. Land currently committed to a specific use would be allocated to that current use unless there is an overriding need to change the use.

2.4.1 The Planning Process

As part of the process of developing alternatives for the eight RLMPs, TVA reviewed existing and newly collected field data on the condition of and resources on the lands being planned. Each parcel of land was reviewed to determine its physical capability for supporting potential suitable uses. TVA also reviewed deeds of selected tracts previously sold to private entities to identify existing shoreline access rights. Based on this information, the TVA planning team “pre-allocated” land parcels to one of the seven allocation zones used in recent TVA reservoir land plans and described in Table 1-1. Information on public concerns obtained during the scoping process described in Section 1.5 was incorporated into the zone allocations proposed in the RLMPs as well as any previous land planning effort such as Forecasting or Multiple Use Tract Allocations (see Appendix B). Approximately 27 percent of the shoreline on the eight reservoirs are lands that TVA does not own in fee. These are typically flowage easement lands that are allocated to Zone 1 (Non-TVA Shoreland). Non-TVA Shoreland is not included in this planning process.

2.4.2 Committed Land

For planning purposes, land is considered committed if it is under lease, easement, license, or contract; is a developed TVA project critical to the operation of the integrated reservoir system such as a dam reservation or power lines; has known sensitive resources present; has a unit plan; fronts land transferred or sold for public recreational use; or is a TVA developed recreation area. Agricultural licenses are not considered committed uses because they are an interim use of TVA public land.

Land currently committed to a specific use would be allocated to a land use zone compatible with the current use unless there is an overriding need to change the use. Possible reasons to change allocations may include ongoing adverse impacts resulting from the actions of a licensee, lessee, or easement holder. If sensitive resources were identified on a committed parcel (with an existing lease, license, easement, etc.) during the allocation process, that parcel would remain allocated to a zone appropriate for that committed use unless an ongoing adverse impact were found. However, TVA approval would be required prior to future activities that could impact the identified sensitive resources.

In the eight RLMPs, TVA does not propose to change any committed land uses. As shown on Table 2-2, approximately 56 percent of the TVA public land surrounding the eight reservoirs were considered committed during the pre-allocation process.

Table 2-2. Committed and Uncommitted Acreage by Reservoir

Reservoir	Committed (acres)	Uncommitted (acres)
Chickamauga	9,633.7	6,427.8
Fort Loudoun	922.8	590.3
Great Falls	362	0
Kentucky	38,983	35,730
Nickajack	1,424.2	2,180.5
Normandy	1,861.9	2,935.4
Wheeler	22,455	13,605
Wilson	1,238.4	7.7
Total	**76,881.3**	**61,476.4**
Percent	**55.6**	**44.4**

2.4.3 Uncommitted Land

The balance of TVA land on eight reservoirs (61,476 acres or 44.4 percent) are not committed to a specific use through an easement, lease, license, or other land use agreement. Field data and existing information in the TVA Natural Heritage database were collected on many uncommitted parcels by technical specialists to identify areas containing sensitive resources. Representatives from different TVA organizations including power generation, land and shoreline management, recreation, and economic development met to allocate the parcels of TVA public land into the seven planning zones. Using maps that identified the location of known and potential sensitive resources (e.g., cultural resources, wetlands, threatened and endangered species, and areas of high scenic quality), the capability and suitability for potential uses of each parcel were considered. The proposed allocations reflect the consensus of the planning team members.

2.4.4 Land Committed to Shoreline Access

Since originally acquiring the land around the eight reservoirs, TVA has sold or transferred over 79,000 acres of land to various public and private parties. TVA typically retained the land lying below the maximum shoreline contour (MSC) elevation of the specific reservoir. The MSC is defined as the contour, usually 5 feet above the top of gates of a TVA dam, which marks the landward limit of permanent flood rights. The bulk of the public land TVA retained below the MSC has deeded rights of ingress and egress for water access from the back-lying property. TVA identified the land remaining in TVA ownership between the maximum shoreline contour and the water as “marginal strip property.” The width of this marginal strip of TVA-retained land varies by reservoir, and the total acreage of this land may be large, especially on those reservoirs having a substantial shoreline. Although TVA has not calculated exact acreages of the marginal strip on some of the reservoirs, planning objectives are not impacted because these lands are committed to the back-lying land use via the transfer agreement covenants and provisions.

2.4.5 Description of Alternative B – Proposed Land Use Plan Alternative

TVA has identified one action alternative, Alternative B – Proposed Land Use Plan Alternative. Under this alternative, TVA would implement eight RLMPs to guide future land use decisions on these reservoirs. Consistent with other TVA RLMP planning efforts, the lands managed by TVA on these reservoirs would be placed into one of the seven land use zones shown on Table 1-1 based on current land usage, existing land rights (i.e.,

Reservoir (Acres of TVA Land)	Summary of Major RLMP Decisions
Fort Loudoun (1,513.2 acres)	As detailed in Volume III of the EIS, TVA proposes major changes to Zone 6 (Developed Recreation) and Zone 7 (Shoreline Access) allocations. Zone 6 changes are proposed because previous planning efforts underestimated the amount of lands utilized for recreation or under existing recreational agreements. Zone 7 changes are proposed to more accurately reflect the lands encumbered with shoreline access rights. The proposed RLMP would replace allocations made using the Forecast System in the 1970s. Of the 1,513.2 acres of TVA lands on the reservoir, TVA proposes to change the allocation of 261.9 acres (17.3 percent). Of those changes, 102.6 acres would be changed to reflect existing agreements and commitments and 159.3 acres would be changed based on other considerations.
Great Falls (362.4 acres)	As detailed in Volume IV of the EIS, TVA proposes to use the relatively small area of TVA-managed lands on this reservoir for Zone 6 (Developed Recreation) based on the historical and proposed recreation operations of the State of Tennessee. The proposed RLMP would be the first land use plan developed for TVA public lands on Great Falls Reservoir.
Kentucky (74,713.5 acres)	As detailed in Volume V of the EIS, TVA proposes substantive changes to allocations of Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation) based on new information about the presence/absence of sensitive resources. More lands would be allocated to Zone 3 (an increase of 5 percent) and fewer lands would be allocated as Zone 4 (a decrease of almost 10 percent). Minor increases to Zone 2 (Project Operations), Zone 5 (Industrial), Zone 6 (Developed Recreation) and Zone 7 (Shoreline Access) allocations are also proposed. The proposed RLMP would replace TVA's Kentucky RLMP, developed in 1985 under the Multiple Use Tract Allocation methodology. Of the 74,713.5 acres of TVA lands on the reservoir, TVA proposes to change the allocation of 9,967.9 acres (13.3 percent). Of those changes, 4,057.5 acres would be changed to reflect existing agreements and commitments and 5,910.4 acres would be changed based on other considerations.
Nickajack (3,064.7 acres)	As detailed in Volume VI of the EIS, TVA proposes substantive changes to Zone 2, Zone 3 and Zone 4 allocations. The proposed increase in Zone 2 lands is primarily the result of previous underestimations in the amount of lands encumbered by roadways. The allocation change to one large parcel (Marion Memorial Bridge Natural Area) from Zone 4 to Zone 3 would result in the greatest allocation change under the RLMP, resulting in a large increase in Zone 3 (Sensitive Resource Management) lands and fewer lands allocated as Zone 4 (Natural Resource Conservation). Minor changes to Zone 5, Zone 6 and Zone 7 allocations are proposed. The proposed RLMP would replace TVA's Nickajack RLMP, developed in 1990 under the Multiple Use Tract Allocation methodology. Of the 3,064.7 acres of TVA lands on the reservoir, TVA proposes to change the allocation of 1,116.1 acres (31%). Of those changes,

committed lands), public needs, the presence of known or potential sensitive resources, and TVA policies as described above in the pre-allocation process. Land currently committed to a specific use would be allocated to that current use unless there is an overriding need to change the use

The land areas for each of the proposed zone allocations are summarized by reservoir in Table 2-3, and the zone allocation for each individual parcel is identified in Appendix C. The allocation ranges of the CVLP would be updated according to the allocations proposed in the eight RLMPs.

Table 2-3. Proposed Area Allocation Zone by Reservoir (Alternative B)

Reservoir	Allocations (Acres)						
	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6	Zone 7	Total
Chickamauga	1,220.3	2,563.6	8,656.5	268.1	1,873.4	1,479.5	**16,061.4**
Fort Loudoun	477.2	59.6	317.4	10.5	590.8	57.8	**1,513.3**
Great Falls	19.0	0.0	0.0	0.0	343.4	0.0	**362.4**
Kentucky	1,254.3	5,282.1	55,319.3	2,081.3	5,006.7	5,769.7	**74,713.4**
Nickajack	1,179.4	1,356.7	807.4	85.5	175.1	0.7	**3,604.8**
Normandy	790.7	371.7	3,365.7	0.0	258.8	10.4	**4,797.3**
Wheeler	4,813.5	3,656.2	25,224.2	895.6	1,312.1	143.6	**36,045.2**
Wilson	1,072.1	0.0	0.0	0.0	148.5	2.8	**1,223.4**
Total	**10,826.5**	**13,289.9**	**93,690.5**	**3,341.0**	**9,708.8**	**7,464.5**	**138,321.2**

Land use allocations proposed in the eight RLMPs are summarized in Table 2-4.

Table 2-4. Summary of Proposed Land Allocations by RLMP - Alternative B

Reservoir (Acres of TVA Land)	Summary of Major RLMP Decisions
Chickamauga (16,061.4 acres)	As detailed in Volume II of the EIS, TVA proposes substantive changes to numerous parcels of land currently allocated as Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation). Fewer Zone 3 (Sensitive Resource Management) parcels would be allocated because new information about the presence/absence of sensitive resources. As a result, more parcels would be allocated for Zone 4 (Natural Resource Conservation) and Zone 6 (Developed Recreation). In addition, minor changes to Zone 2 (Project Operations), Zone 5 (Industrial) and Zone 7 (Shoreline Access) are proposed. The proposed RLMP would replace TVA's Chickamauga RLMP, developed in 1989 under the Multiple Use Tract Allocation methodology. Of the 16,061.4 acres of TVA lands on the reservoir, TVA proposes to change the allocation of 5,707.7 acres (35.5 percent). Of those changes, 2,131.1 acres would be changed to reflect existing agreements and commitments and 3,576.6 acres would be changed based on other considerations.

Reservoir (Acres of TVA Land)	Summary of Major RLMP Decisions
	664.8 acres would be changed to reflect existing agreements and commitments and 451.3 acres would be changed based on other considerations.
Normandy (4,797.2 acres)	As detailed in Volume VII of the EIS, TVA proposes relatively minor adjustments to parcel allocations across each land use zone. The greatest change would result in a decrease in Zone 3 (Sensitive Resource Management) parcels, largely due to reallocating one tract from Zone 3 to Zone 4 (Natural Resource Conservation) because new information indicates that sensitive resources are not known to be present in the area. The proposed RLMP would replace allocations made using the Forecast System in the 1970s. Of the 4,797.2 acres of TVA lands on the reservoir, TVA proposes to change the allocation of 1,399.5acres (29.2 percent). Of those changes, 1,006.3 acres would be changed to reflect existing agreements and commitments and 393.2 acres would be changed based on other considerations
Wheeler (36,045.2 acres)	As detailed in Volume VIII of the EIS, TVA proposes substantive changes to Zone 2, Zone 3, Zone 4 and Zone 6 allocations. TVA would increase allocations to Zone 2 to more accurately account for areas encumbered by roadways and road easements (an increase of almost 10 percent). Fewer lands would be allocated to Zone 3 because new information indicates the absence of known sensitive resources on numerous parcels. Some of these parcels would be reallocated for Zone 4 (5 percent). The proposed RLMP would replace TVA's Wheeler RLMP, developed in 1995 under the Multiple Use Tract Allocation methodology. Of the 36,045.2 acres of TVA lands on the reservoir, TVA proposes to change the allocation of 7,105.2 acres (19.7 percent). Of those changes, 2,009.7 acres would be changed to reflect existing agreements and commitments and 5,095.5 acres would be changed based on other considerations
Wilson (1,223.4 acres)	As detailed in Volume IX of the EIS, TVA's proposed RLMP reflects circumstances unique to Wilson Reservoir. The proposed RLMP would be the first land use plan developed for TVA public lands on Wilson Reservoir. Approximately 87 percent of areas would be allocated for Project Operations (Zone 2) to reflect lands encumbered by transmission lines and utility easements and lands set aside to support future power operations of the dam (and potential navigation in and around the Wilson Lock and Fleet Harbor). Almost 13 percent of lands would be allocated as Zone 6 and a small tract would be allocated for Zone 7.

2.4.5.1 Land Reserved for Shoreline Access

As part of the current land planning process, TVA reviewed deeds of selected tracts previously sold to private entities to identify existing shoreline access rights. Those parcels were allocated to Zone 7 to reflect current conditions. Based on the TVA SMP, these back-lying property owners with access rights may apply to TVA for approval to construct private water use facilities on the TVA-managed shoreline land.

In the proposed RLMPs, TVA proposes to rezone numerous parcels to Zone 7 (Shoreline Access) to accurately reflect the existing rights of private entities to access shoreline. The proposed rezoning of these parcels to Zone 7 does not represent a decision by TVA to increase shoreline access on its reservoirs; rather, these changes are essentially corrections being made to current plans to reflect existing rights. A summary of the number of parcels and corresponding acres of land reallocated to provide shoreline access is shown on Table 2-5. Additional detail is provided in Appendix D, Tables D-1 through D-6.

Table 2-5. Summary of Changes in Zone 7 Allocation – Alternative B

Reservoir	Total Number of Parcels	Number of Parcels with Changed Allocation	Percent of Total Parcels	Acres	Percent of Total TVA Land
Chickamauga	395	18	4.3	34.4	0.21
Fort Loudoun	130	3	2.3	3.3	0.22
Great Falls	2	0	0	0	0
Kentucky	574	133	23.2	1,835.2	2.5
Nickajack	41	2	4.9	0.7	0.02
Normandy	30	1	3.0	1.0	<0.1
Wheeler	207	3	1.4	8.4	0.02
Wilson	14	0	0	0	0

Note: There are no changes in the proposed shoreline allocations for parcels surrounding Wilson and Great Falls reservoirs.

2.4.5.2 Comprehensive Valleywide Land Plan

TVA proposes to update the allocation ranges identified by TVA in the 2011 CVLP to reflect the findings and incorporate the proposed allocations of the eight RLMPs. The proposed allocations ranges are shown in Table 2-6.

Table 2-6. Proposed Update to CVLP Allocations

Allocation Designation		Range of Allocations in 2011 CVLP	Proposed CVLP Allocation Range (2016)
Zone 2	Project Operations	5% to 7%	7% to 10%
Zone 3	Sensitive Resource Management	16% to 18%	14% to 18%
Zone 4	Natural Resource Conservation	58% to 65%	56% to 63%
Zone 5	Industrial	1% to 2%	1% to 3%
Zone 6	Developed Recreation	8% to 10%	8% to 10%
Zone 7	Shoreline Access[1]	5%	5% to 6%

[1] TVA allocates land to Zone 7 (Shoreline Access) in accordance with TVA's Shoreline Management Policy.

The proposed revisions to the CVLP target ranges do not reflect a change to any other decisions made by TVA in its NRP. TVA remains committed to implementing its NRP and meeting the goals and objectives of the CVLP.

An explanation of proposed revisions to the CVLP zone allocation ranges is provided below:

- Zone 2 (Project Operations) – In the eight RLMPs, TVA found that historical planning efforts under-estimated the amount of property encumbered with roads, utilities, and other public works projects. The proposed CVLP Allocation Range would be adjusted (increased) to accommodate similar findings on reservoir property across the Valley.
- Zone 3 (Sensitive Resource Management) – Historically, TVA has made conservative estimates when designating property to support sensitive resources due to lack of site-specific verifiable data. TVA now utilizes a variety of technologies such as comprehensive land condition assessments, time-lapsed aerial photography, the TVA Natural Heritage database, cultural resources databases, and other site-specific data when allocating property for Sensitive Resource Management. The additional reviews taken to verify the presence of known sensitive resources has resulted in a reduction of property allocated to Zone 3. The proposed CVLP Allocation Range has been adjusted to accommodate similar situations should they occur on other reservoirs.
- Zone 4 (Natural Resource Conservation) – TVA proposes to adjust the CVLP Allocation Range to accommodate adjustments for the other land use zones. For example, lands currently allocated to Zone 4 could be allocated to other zones to accommodate encumbrances, support sensitive resources, or to facilitate economic development and recreation.
- Zone 5(Industrial) – TVA proposes to adjust the CVLP Allocation Range by 1 percent to accommodate the potential for future industrial opportunities. For example, the proposed change could accommodate back-lying property owners that have general egress and ingress rights across TVA property, future water-access purposes on privately owned back-lying land, and areas deemed suitable for industrial use by TVA's Economic Development staff. Future development of these properties would be consistent with TVA regulations and policies.
- Zone 6 (Developed Recreation) – No change in the CVLP Allocation Range is proposed.
- Zone 7 (Shoreline Access)– Recent research of deeds shows that on certain RLMP parcels, the current zone allocations have the potential to conflict with egress and ingress rights of the adjacent property owners if the current back-lying land use were to change. Land plans are not intended to supersede TVA's SMP. TVA proposes to adjust the CVLP Allocation Range to accommodate future allocations consistent with SMP and TVA's Land Policy.

2.5 Comparison of Alternatives

The land area within each reservoir that would be allocated differently under the alternatives are summarized in Table 2-7. Implementation of Alternative B would result in changes of zone allocation on a total of 25,558 acres of land, (roughly 18 percent of the 138,321.2 acres of TVA-managed land). Approximately 7 percent of the proposed allocations reflect existing land use agreements and commitments. Reallocations proposed for approximately 11 percent of TVA managed land are not based on existing agreements or commitments. Detailed descriptions of re-allocations by parcel that were not based on existing land use agreements and commitments are identified in Appendix D, Table D-7 through D-11. Only six of the eight reservoirs are represented in the table because there

are no changes in the proposed land use allocations for parcels surrounding Wilson and Great Falls reservoirs.

Table 2-7. Lands Reallocated by Reservoir for Alternatives A and B

Zone	Alternative A		Alternative B	
	Acres	Percent	Acres	Percent
0[1]	69.4	<0.1	0.0	0
2	9,204.6	6.7	10,826.5	7.8
3	15,579.6	11.3	13,289.9	9.6
4	96,991.0	70.2	93,690.5	67.7
5	2,037.7	1.5	3,341.0	2.4
6	8,064.9	5.8	9,708.8	7.0
7	6,374.3	4.6	7,464.5	5.4
Total	**138,321.4**		**138,321.2**	

[1] Parcels or portions of parcels that were not previously planned. Note: Percentages do not add to 100 due to rounding.

Generally, land allocations under Alternative B were proposed to reflect actual uses of parcels, the presence of known sensitive resources, or existing land rights or restrictions for parcels. As such, the proposed changes in allocations are minor and therefore the difference between the two alternatives is minor.

The total number of acres of TVA lands around the eight reservoirs allocated to Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation) is slightly lower under Alternative B. In turn, the amount of land allocated to Zone 2 (Project Operations), Zone 5 (Industrial), Zone 6 (Developed Recreation) and Zone 7 (Shoreline Access) is slightly higher under Alternative B.

2.6 Summary of Impacts

The environmental impacts of potentially affected resources associated with Alternatives A and B are summarized in Table 2-8. These summaries are derived from the information and analyses provided in Chapter 3 (Affected Environment and Environmental Consequences).

Section 101 of NEPA declares that it is the policy of the federal government to use all practicable means and measures, in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations. TVA believes that the alternatives are consistent with this policy. Because of the environmental safeguards in each alternative, a wide range of beneficial uses of the environment could be obtained without degradation or unintended consequences under each alternative.

Table 2-8. Summary and Comparison of Alternatives by Resource Area

Resource	Potential Impacts	Alternative A - No Action	Alternative B – Proposed Land Use Plan Alternative
Land Use	Changes to Land Use	Minor direct impact. Minor indirect impact due to absence of a comprehensive plan to consider land use requests that would be applied in a consistent manner across all TVA reservoirs. Long-term impact to system-wide planning due to inability to revise CVLP target ranges.	Minor direct impact. Minor beneficial impact due to optimization of land use and stewardship as a result of implementation of a comprehensive plan. In addition, an updated CVLP would achieve the desired overall balance of land uses on a system-wide basis.
Prime Farmland	Conversion of prime farmland; a farmland rating would be required before development.	Smaller acreage potentially affected. Minor adverse impacts.	Slightly greater number of acreage affected. Minor adverse impacts.
Recreation	Availability of Developed (Zone 6) and Dispersed recreational opportunities	Smaller amount of land allocated to Zone 6, resulting in minor adverse impacts. Greater amount of land allocated to Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation), minor beneficial impact to dispersed recreation.	Greater amount of land allocated to Zone 6, resulting in minor beneficial impacts. Minor adverse impact to dispersed recreation due to smaller amount of land allocated to Zones 3 and 4. Overall beneficial impact due to development of a consistent, systematic process for identifying developed and dispersed recreational opportunities on individual parcels.
Terrestrial Ecology	Loss and fragmentation of terrestrial vegetation and wildlife habitat from clearing and ground disturbing activities; indirect effects associated with dispersed recreation and spread of invasive plants.	Smaller area potentially affected. Minor impacts to common plant and wildlife communities.	Slightly greater area potentially affected. Minor impacts to common plant and animal species given the relatively large amount of land allocated to Zone 3 and 4.
Aquatic Ecology	Alteration of aquatic species and habitat primarily from shoreline modification.	Slightly lower potential for ground disturbing activities; minor impact due to review of future land use requests and use of best management practices (BMP) as needed to minimize impacts.	Slightly higher potential for ground disturbing activities; minor impact due to review of future land use requests and use of BMPs as needed to minimize impacts.

Resource	Potential Impacts	Alternative A - No Action	Alternative B – Proposed Land Use Plan Alternative
Threatened and Endangered Species	Direct impacts associated with clearing and ground disturbance; indirect impacts from habitat fragmentation, human visitation, spread of invasive species, and displaced effects in time or place from an action.	Slightly greater amount of land allocated to zones protective of threatened and endangered species. Minor impacts as all future development would require site specific review.	Slightly fewer parcels allocated to zones protective of threatened and endangered species. However, parcels with known records of threatened and endangered species are allocated to protective zones. Minor impacts as all future development would require site specific review.
Water Quality	Impacts from runoff of pollutants and soil erosion.	Lower potential for ground disturbing activities and increased water supply and discharge; minor impact due to review of future land use requests and use of BMPs as needed to minimize impacts.	Slightly increased potential for ground disturbing activities and increased water supply and discharge; minor impact due to review of future land use requests and use of BMPs as needed to minimize impacts.
Wetlands	Impact to wetlands from land clearing and ground disturbance.	No direct impacts assuming protection under EO 11990 and Section 404 (b)(1) of the CWA. Minor indirect impacts associated with dispersed recreation and clearing for shoreline access.	No direct impacts assuming protection under EO 11990 and Section 404 (b)(1) of the CWA. Minor indirect impacts associated with dispersed recreation and clearing for shoreline access.
Floodplains	Adverse impacts to floodplains and floodplain values.	Minor impact. Any adverse impacts would be minimized by adherence to EO 11988. Potential projects would be reviewed for consistency with EO 11988 on a case-by-case basis.	Minor impact. Any adverse impacts would be minimized by adherence to EO 11988. Potential projects would be reviewed for consistency with EO 11988 on a case-by-case basis.
Air Quality and Climate Change	Emissions from construction and development activities.	Project level review would be required. Negligible impact.	Project level review would be required. Negligible impact. Alternative B would likely result in greater quantities of greenhouse gas emissions and fewer carbon sinks than Alternative A.
Cultural and Historic Resources	Damage to archaeological and historic properties.	TVA will comply with the NRP Programmatic Agreement executed in 2011 in consultation with the SHPOs, Advisory Council of Historic Preservation and federally recognized Indian tribes which subsumes and governs all past and future land plans. All projects would be	Also under Alternative B, TVA will comply with the NRP Programmatic Agreement executed in 2011. All projects would be subject to the regulatory requirements of the NHPA.

Resource	Potential Impacts	Alternative A - No Action	Alternative B – Proposed Land Use Plan Alternative
		subject to the regulatory requirements of the NHPA.	
Managed Areas and Ecologically Sites	Incompatible land use on adjacent areas. Impacts on sensitive resources.	No direct impact. Minor indirect impact to system-wide planning and management of these areas.	No direct impact. Minor beneficial impact as a result of efficient management of these areas consistent with other reservoirs in the TVA system.
Aesthetic and Visual Resources	Effects on scenic quality. Gradual degradation of visual resources.	Minor impact due to decline in visual resources over time due to lack of consistent planning to protect visual resources.	Long-term beneficial impact due to implementation of protective management of visual resources.
Noise	Noise generated by facilities associated with Zone 5 (Industrial), Zone 2 (Project Operations), or Zone 6 (Developed Recreation).	Minor impact.	Potential for noise generation higher than Alternative A. Minor impact.
Socioeconomic Resources and Environmental Justice	Effects to the local economy and populations	Long-term negligible to minor impact to the local economy and economic development opportunities related to missed opportunities to increase the overall benefit of reservoir land due to the absence of comprehensive planning. No disproportionate impact on disadvantaged populations.	Minor beneficial impact on the local economy and economic development opportunities in the area through the enhancement of management of public lands.
Cumulative Effects	Effects of the proposed action together with the potential future actions by others based on general trends that are anticipated within the reservoirs and the counties where they are located.	Minor cumulative effects as federal and state water quality regulators, municipal/local programs, and others including TVA's own environmental monitoring programs would combine in an effort to offset threats to environmental resources from uncontrolled economic growth and development.	Minor cumulative effects as federal and state water quality regulators, municipal/local programs, and others including TVA's own environmental monitoring programs would combine in an effort to offset threats to environmental resources from uncontrolled economic growth and development.

2.7 Identification of Mitigation Measures

TVA's analysis of the preferred alternative includes mitigation, as required, to reduce or avoid adverse effects. Mitigation measures are actions that could be taken to avoid, minimize, or reduce or compensate for adverse impacts to the environment. In considering requests of TVA lands allocated under the eight RLMPs, TVA would implement the following commitments and mitigation measures.

- Prior to approving any use of land on the eight reservoirs, TVA would conduct an appropriate level of site-specific environmental review to determine the potential environmental effects of the proposed use.
- As necessary, based on the findings of any site-specific environmental review, TVA may require the implementation of appropriate mitigative measures, including BMPs (e.g. Section 26a General and Standard Conditions/BMPs (TVA 2005a) as a condition of approval for land use on the TVA-managed lands on the eight RLMPs.
- In the event that a land use request involves industrial development, the subject environmental review will determine and document the extent of expected air quality impacts. Should the requested parcel be located in or potentially affect a nonattainment area for ozone or $PM_{2.5}$, TVA shall require a conformity applicability determination pursuant to regulations implementing Section 176(c) of the CAA to assure compatibility with measures in local plans for achieving attainment.
- Any future development of lands potentially supporting use by sensitive species will be coordinated with both state and federal agencies, as appropriate.
- Consistent with EO 13112, disturbed areas would be revegetated with native or non-native, non-invasive plant species to avoid the introduction or spread of invasive species.
- TVA will comply with the NRP Programmatic Agreement executed in 2011 in consultation with the SHPOs, Advisory Council of Historic Preservation, and federally recognized Indian tribes which subsumes and governs all past and future land plans.

2.8 Preferred Alternative

The preferred alternative is Alternative B – Proposed Land Use Plan Alternative. Alternative B provides advantages relative to Alternative A as it establishes as a planning framework for RLMPs that brings consistency to the land planning process across the eight reservoirs considered in this document. Alternative B also applies a systematic method of evaluating and identifying the most suitable use of TVA public lands in furtherance of TVA's responsibilities under the TVA Act. In addition, the proposed RLMPs incorporate numerous updates to existing plans to reflect actual uses of parcels, the presence of known or potential sensitive resources, or existing land rights or restrictions for parcels.

This page intentionally left blank

CHAPTER 3 – AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This chapter contains a description of the current conditions of various resources in the area of the eight reservoirs included in this analysis that could be affected by implementation of the proposed RLMPs. The description of the affected environment presented in this chapter is based on more detailed resource information on the eight TVA reservoirs that is provided in Volumes II through IX of this EIS.

What are "direct" and "indirect" impacts?

- *Direct impacts* are effects caused by a proposed action that occur at the same time and place (on site).
- *Indirect impacts* are effects caused by a proposed action but are removed in time or space (off site).

Potential direct and indirect effects of Alternatives A and B on each of the identified resources are also analyzed in this chapter. Direct impacts are effects caused by a proposed action that occur at the same time and place (on site), whereas indirect impacts are effects caused by a proposed action but are removed in time or space (off site). Cumulative impacts are addressed at the end of this chapter.

As discussed in Chapter 2 under Alternative A, TVA would not take any action to align or complete plans on the TVA managed lands on the eight reservoirs. As a result, land management and future land use decisions would continue in accordance with existing plans, or in the case of those reservoirs without an existing plan, in accordance with existing commitments, land use agreements, and TVA policies. Under Alternative B, TVA would implement eight RLMPs that would be used to manage existing land uses and guide future land use decisions. TVA's proposed RLMPs would allocate lands into one of the seven land use zones based on current land usage, existing land rights (i.e., committed lands), public needs, the presence of known sensitive resources and TVA policies as described above in the pre-allocation process. Land allocations under Alternative B were primarily proposed to reflect existing conditions and suitable uses of land, and as such the difference in land allocations between the two alternatives is minor.

In order to facilitate the comparison of alternatives, the existing land uses designations for the reservoirs have been converted to the equivalent designation of one of the seven proposed land use zones. The analyses of direct, indirect and cumulative environmental consequences in this chapter were based upon the assumption that any activity allowed under a particular zone would occur at the greatest allowable intensity on the entire extent of the parcel. For example, on a 10-acre parcel allocated to Zone 5 (Industrial), it was assumed the entire 10 acres would be cleared of vegetation and developed to support an industrial facility. Activities on Zone 7 (Shoreline Access), Zone 2 (Project Operations), and Zone 6 (Developed Recreation) may include development, construction, and landscaping, but some areas of a parcel may be left in a relatively natural state. Therefore, the analysis was based upon the assumption that the potential for altering the existing conditions of a parcel are greatest under Zone 5 (Industrial), moderate under Zone 7 (Shoreline Access), Zone 2 (Project Operations), and Zone 6 (Developed Recreation), minor under Zone 4 (Natural Resource Conservation) and least under Zone 3 (Sensitive Resource Management). Future projects, when planned in detail, will be evaluated to determine

site-specific environmental impacts, and potential impacts to sensitive resources would be identified and avoided or minimized as appropriate and in a manner consistent with applicable laws and regulations.

Neither of the alternatives under consideration are expected to be controversial, involve unique or unknown risks, or violate federal, state, or local laws.

3.1 Description of the Reservoirs

The proposed RLMPs and EIS address public lands surrounding eight reservoirs located in Alabama, Kentucky, and Tennessee (see Figure 1-1). Selected characteristics of each reservoir are shown on Table 3-1.

Table 3-1. Selected Characteristics of Reservoirs Included in the Multiple Land Plan EIS

Reservoir	Dam Location[1]	Length of Reservoir (miles)	January 1 Flood Storage (acre-feet)	Shoreline (miles)	Summer Pool Elevation (feet above msl)[2]	Annual Pool Variation (feet)
Chickamauga	TRM 471.0	59	345,300	784	682.5	6
Fort Loudoun	TRM 602.3	50	111,000	379	813	5
Great Falls	CRM 91.1	22	30,500	120	800[3]	25.3[3]
Kentucky	TRM 22.4	184	4,008,000	2,064	359	5
Nickajack	TRM 424.7	46	No flood storage	192	632.5-634.5	NA
Normandy	DRM 248.6	17	48,000	75	875	11
Wheeler	TRM 274.9	74	326,500	1,063	556	5
Wilson	TRM 259.4	15	50,500	166	507.9	NA

[1] TRM = Tennessee River Mile, CRM = Caney River Mile, DRM = Duck River Mile
[2] msl = mean sea level
[3] from the draft 2015 Great Falls RLMP

NA = Run-of-River Projects which are operated based on stream flow with little seasonal change in storage.

Source: TVA 2016a

3.1.1 Chickamauga Reservoir

Chickamauga Dam was the fourth of the main-river projects to be constructed by TVA and was completed in 1940. Chickamauga Dam is 129-feet-high and stretches 5,800 feet across the Tennessee River at TRM 471.0 in Hamilton County, Tennessee. The dam is located 7 miles above Chattanooga and maintains a navigation channel approximately 59 miles up the Tennessee River to Watts Bar Dam and along the Hiwassee River to Charleston, Tennessee. It was constructed to improve navigation and bring flood control and economic development to the Tennessee Valley. Its close proximity to Chattanooga contributes to the reservoir's importance as a destination for a variety of recreational uses. The Chickamauga Dam is a hydroelectric facility equipped with four generating units which can produce up to 119 megawatts of electricity. The Chickamauga Reservoir has a flood storage capacity of 345,300 acre-feet. TVA manages more than 16,000 acres of public lands on the reservoir. A detailed description of Chickamauga Reservoir and surrounding TVA lands is provided in Volume II.

3.1.2 Fort Loudoun Reservoir

Fort Loudoun Dam is 122 feet tall, approximately 4,190 feet long and is located on the Tennessee River at TRM 602.3 in Loudon County, Tennessee. Construction of the dam began in 1940 and was completed in 1943. The reservoir is the uppermost in the chain of nine TVA reservoirs that form a continuous navigable channel from just upstream of Knoxville to Paducah, Kentucky, 652 miles away. The reservoir waters extend from the dam through predominately residential areas of Knox and Blount counties into more urban and industrial areas of downtown Knoxville and East Knox County. Approximately 63 percent of reservoir's shoreline is developed for residential use. In addition to safe navigation travel, Fort Loudoun Reservoir assists in storing flood waters (the reservoir has a flood storage capacity of 345,300 acre-feet). The dam is a hydroelectric facility equipped with four generating units which can produce up to 162 megawatts of electricity. Other benefits of the reservoir include preserving aquatic and wildlife habitats, as well as providing important opportunities for a wide variety of recreational activities for relatively large populations in Knox, Blount, and Loudon counties. There are just over 1,500 acres of TVA-managed lands on the reservoir. A detailed description of the Fort Loudoun Reservoir and surrounding lands is provided in Volume III.

3.1.3 Great Falls Reservoir

Great Falls Dam is 92 feet tall, approximately 800 feet long and is located at Caney Fork River about 75 miles southeast of Nashville, Tennessee. Great Falls Reservoir is contained within Warren and White counties. Acquired by TVA in 1939, the dam is one of seven dams acquired by TVA from private companies, and it is located in the Cumberland River Basin. It is the only TVA dam located outside the Tennessee River watershed. Great Falls Reservoir is a single-purpose power project with a limited amount of flood storage; there are only 362.4 acres of TVA-managed lands on the reservoir. It has two generating units which can produce up to 36 megawatts of electricity. The area surrounding Great Falls Reservoir is scenic with numerous waterfalls and areas that provide opportunities for a wide variety of recreational activities, including the Rock Island State Park. A detailed description of Great Falls Reservoir and surrounding lands is provided in Volume IV.

3.1.4 Kentucky Reservoir

Construction of Kentucky Dam was accomplished in 6 years, from July 1938 to dam enclosure in September 1944. Kentucky Dam is located at on the Tennessee River at TRM 22.4, which is 22 miles upstream from the confluence of the Tennessee River with the Ohio River. The dam is the longest in the TVA system, and Kentucky Reservoir, which stretches for 184 miles across the states of Kentucky and Tennessee, is the largest in the eastern U.S. The reservoir's strategic location and vast storage capacity help reduce flood crests on the Ohio and Mississippi rivers. Kentucky Dam is also a major producer of hydroelectric power, and can produce up to 184 megawatts of electricity. The navigation lock at the dam forms the lower gateway to the Kentucky Reservoir and opens the Tennessee River to year-round navigation and links the Tennessee Valley with the nation's Inland Waterway System. Large expanses of lands surrounding the reservoir are managed for protection and public use; less than 20 percent of shoreline around the reservoir has been developed for residential use. TVA manages almost 75,000 acres of public lands around the reservoir. Public areas surrounding the reservoir include the Land Between the Lakes National Recreation Area, four state parks, the Tennessee National Wildlife Refuge, boat ramps, resorts, campsites and other developed and undeveloped areas provide opportunities for a wide variety of recreational activities. A detailed description of Kentucky Reservoir and surrounding lands is provided in Volume V.

3.1.5 Nickajack Reservoir

Nickajack Dam was completed in 1967 and is located on the Tennessee River at TRM 427.7 in Marion County, Tennessee. It was the eighth dam constructed by TVA along the main Tennessee River. Nickajack Dam is a hydroelectric facility with four generating units which can produce up to 105 megawatts of electricity per day. Nickajack Dam has two parallel navigation locks, one auxiliary lock that is 110 feet wide by 600 feet long, and a partially complete main lock that is 110 feet wide by 800 feet long. TVA manages more than 3,600 acres of land on Nickajack. The area surrounding the reservoir supports recreational activities including boat launching ramps, a fishing pier, and camping and picnicking facilities. A detailed description of Nickajack Reservoir and surrounding lands is provided in Volume VI.

3.1.6 Normandy Reservoir

Construction of Normandy Dam was completed in 1976. The dam is 110 feet high and 2,807 feet long and is located on Duck River at DRM 248.6, approximately 8 miles north of Tullahoma, Tennessee and 1.5 miles upstream from Normandy, Tennessee in Bedford and Coffee counties. Normandy Reservoir was impounded for water supply, flood control, and recreational development of the upper Duck River region. Normandy Dam is not a hydroelectric facility. TVA manages almost 4,800 acres of land on the reservoir. The Duck River watershed is one of the most biologically diverse river systems in the nation. Over 500 species of fish, insects and other aquatic life inhabit the ecosystem, including two species of mussels on the endangered species list. A detailed description of Normandy Reservoir and surrounding lands is provided in Volume VII.

3.1.7 Wheeler Reservoir

Construction of Wheeler Dam began in 1933 and was completed in 1936. Located on the Tennessee River at TRM 274.9, Wheeler Dam is 72 feet high and stretches 6,342 feet across the Tennessee River in Lauderdale and Lawrence counties in Alabama. Wheeler Dam is a hydroelectric facility equipped with 11 generating units capable of producing 361 megawatts of electricity. Wheeler is one of nine reservoirs that create a stairway of navigable water on the Tennessee River from Knoxville, Tennessee to Paducah, Kentucky. Because the reservoir helps maintain the water depth needed to maintain navigation on the Tennessee River, the lake level can vary only by a matter of feet from winter to summer. TVA manages more than 36,000 acres of lands around the reservoir. Barge traffic on the reservoir has made it one of the major centers along the Tennessee waterway for shoreline industrial development. Lands around the reservoir also support various recreational facilities. A detailed description of Wheeler Reservoir and surrounding lands is provided in Volume VIII.

3.1.8 Wilson Reservoir

The construction of Wilson Dam began in 1918 and was completed in 1925 by the U.S. War Department. TVA acquired Wilson Dam in 1933. The dam is 137 feet high and stretches 4,541 feet across the Tennessee River at TRM 259.4 in Colbert and Lauderdale counties in northwest Alabama. Wilson Dam is the largest conventional hydroelectric facility in the TVA system and can produce up to 663 megawatts of electricity. Wilson Reservoir, together with Pickwick and Wheeler reservoirs, covers the Muscle Shoals which once blocked navigation on the Tennessee River. The reservoir and surrounding lands provide navigation, hydropower production, recreation and a range of other benefits. TVA manages more than 1,200 acres on Wilson Reservoir, most of which are for dam operations adjacent to TVA's Muscle Shoals reservation. A detailed description of Wilson Reservoir and surrounding lands is provided in Volume IX.

3.2 Land Use

3.2.1 Affected Environment

Existing land use patterns along the shoreline and back-lying land have been influenced by initial TVA land acquisition and subsequent disposition via the sale, transfer of ownership, or retention of properties. TVA originally acquired about 209,500 acres of land on the eight reservoirs (see Table 1-2). About 38 percent (79,466 acres) of this land has been sold for private use or transferred to other federal and state agencies for public use.

As described in Section 2.4.1, TVA typically retained the land below the MSC fronting the transferred or sold lands. The transfer agreements allow for the management of these retained lands by the agencies consistent with their management of the adjacent back-lying land (see TVA-Owned and Jointly Managed Shoreline in Table 3-2). In cases where TVA sold back-lying land to private persons or entities, the sale deeds typically allow for rights of ingress and egress across the narrow strip of TVA-retained land (also known as the marginal strip); therefore, the back-lying landowners typically have the right to apply to TVA for permission to construct private water use facilities on the TVA-retained land.

Shoreline ownership data as presented in the SMI EIS (TVA 1999) for seven of the eight reservoirs is summarized in Table 3-2. The 4,673 miles of shoreline along these reservoirs is managed by TVA, either as flowage easement or shoreline access land. Great Falls Reservoir is not shown on the table because it was not part of the scope of the SMI EIS (TVA 1999).

Table 3-2. Shoreline Ownership Data

Reservoir	Flowage Easement Shoreline		TVA-Owned Residential Access Shoreline		TVA-Owned and Jointly Managed Shoreline		TVA-Owned and Managed Shoreline		Total Shore-line Miles
	Miles	% of Total Miles	Miles	% of Total Miles	Miles	% of Total Miles	Miles	% of Total Miles	
Chickamauga	7.2	0.9	241.5	30.8	331.5	42.3	203.5	26.0	783.7
Fort Loudoun	304.3	80.5	12.9	3.4	41.4	10.9	19.6	5.2	378.2
Kentucky	710.7	34.4	226.2	11.0	461.9	22.4	665.5	32.2	2,064.3
Nickajack	98.0	54.8	0.0	0.0	35.6	19.9	45.1	25.2	178.7
Normandy	0.0	0.0	11.2	14.9	6.1	8.1	57.8	77.0	75.1
Wheeler	11.3	1.1	154.1	15.0	560.1	54.5	301.7	29.4	1,027.2
Wilson	153.1	92.1	4.7	2.8	1.3	0.8	7.1	4.3	166.2
Total	**1,284.6**	**27.5**	**650.6**	**13.9**	**1,437.9**	**30.8**	**1,300.3**	**27.8**	**4,673.4**

Source: TVA 1999.

Most of the residential development along the reservoirs is on land TVA sold with shoreline access rights across the retained land below the MSC. These areas are allocated as Zone 7 (Shoreline Access) or as private land where TVA only has the right to flood to a certain elevation (i.e., Zone 1 – Non-TVA Shoreline). TVA used aerial photography and Geographic Information System mapping to estimate the amount of shoreline that is

available for residential development that has actually been developed. The amount of developed residential shoreline ranges from approximately 63 percent on Fort Loudoun Reservoir to approximately 18 percent on Kentucky Reservoir (Table 3-3). In total, 41 percent of the combined shoreline (approximately 1,935.2 miles) around the reservoirs shown in Table 3-1 is available for residential development. Development has already occurred on about 35 percent of the shoreline available for residential development (about 684 shoreline miles).

Table 3-3. Percent of Shoreline Available for Residential Development and Percent of Available Shoreline Developed

Reservoir	Percent of Total Shoreline Available for Residential Development[1]	Percent of Available Shoreline Already Developed
Chickamauga	31.7%	44.3%
Fort Loudoun	83.9%	62.6%
Great Falls	NA	NA
Kentucky	45.49%	17.9%
Nickajack	54.8%	25.4%
Normandy	14.9%	40.9%
Wheeler	16.1%	54.5%
Wilson	94.9%	57.1%
Totals	**41.4**%	**35.3%**

[1]Sum of flowage easement and residential access shoreline
NA = Not applicable

The extent to which each of the eight reservoirs has been developed for residential use varies greatly due to differences in the way that TVA originally acquired land and later transferred and/or sold it. For example, most of the property surrounding Wilson Reservoir was secured via flowage easement, and therefore there is more private shoreline available for residential development. Conversely, TVA originally purchased approximately 103,070 acres of land in fee and approximately 827 acres of easements for Wheeler Reservoir and as such, the amount of shoreline available for residential development is smaller. Under TVA's Land Policy, TVA no longer considers new residential land use requests on TVA lands nor will additional TVA land be provided for residential use. Thus, the amount of shoreline available for residential use will not change because of the land planning process.

Many of the TVA-managed parcels on the eight reservoirs have existing land use agreements that commit a parcel to a specific use. Existing land use agreements on all the reservoirs sorted by type and land management zone is shown on Table 3-4. The majority of the land use agreements are for uses such as utilities, highways, and other public infrastructure. Most of these public infrastructure uses affect narrow linear tracts with small acreages. A large proportion of the agreements are for public recreation and include such things as boat ramps, campgrounds and parks that are operated by local, county, and state government agencies. Commercial recreation agreements include docks, marinas, and commercial campgrounds on several of the reservoirs, which are described in more detail in Section 3.4.

Table 3-4. Summary of All Land Use Agreements on the Eight Reservoirs

Land Use Type	Related Allocation Zone	Number of Agreements
Project Operations	Zone 2 (Project Operations)	-
Highways and Roads	Zone 2 (Project Operations)	341
Municipal Uses	Zone 2 (Project Operations)	62
Linear Infrastructure	Based on Adjacent Land Use	325
Industrial	Zone 5 (Industrial)	
Industrial Areas and Sites	Zone 5 (Industrial)	31
Barge Terminals	Zone 5 (Industrial)	13
Railroads	Zone 5 (Industrial)	26
Wildlife Management	Zone 3 (Sensitive Resource Management) or Zone 4 (Natural Resource Conservation)	50
Cultural Resources Management	Zone 3 (Sensitive Resource Management) or Zone 4 (Natural Resource Conservation)	7
Recreation	Zone 6 (Developed Recreation)	-
Commercial	Zone 6 (Developed Recreation)	81
Public	Zone 6 (Developed Recreation)	273
Vegetation Management	Based on Adjacent Land Use	42
Other	Based on Adjacent Land Use	34
Total		**1,285**

3.2.2 Environmental Consequences

The primary change to land use under the proposed action has been the application of the new zone definition (see Table 1-1) to accurately reflect current uses. Allocations of parcels having existing land use agreements (i.e., committed parcels) were not changed under the proposed action and therefore land use did not change on 55.6 percent (see Table 2-2) of the TVA land around the eight reservoirs.

Land use impacts are based upon changes in the amount of land allocated to each zone. In terms of land use, the primary differences between the No Action Alternative and the Proposed Land Plan Alternative (Alternative B) are the reduction of lands allocated to Zone 3 and Zone 4 (Sensitive Resource Management and Natural Resource Conservation) and an increase in land allocated to Zone 6 (Developed Recreation) (see Table 2-7).

The amount of shoreline available for residential development would not change under either alternative, and the existing trends of increasing residential development in areas of the reservoirs currently available for development are more related to broad socioeconomic trends and would be unaffected by the land plan alternatives. Additionally, TVA's Land Policy prohibits allocation of additional lands or land rights for residential use or the disposal of reservoir lands for residential use. Both alternatives are consistent with this policy.

3.2.2.1 Alternative A – No Action

Under the No Action Alternative, TVA would not alter its management of TVA lands on the eight reservoirs under consideration.

Using equivalent land use zones, most (81 percent) of TVA lands would be allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation; see Table 2-7), and there would be little change to existing land use. Uncommitted parcels on land allocated to Zone 5 (Industrial), Zone 6 (Developed Recreation) and Zone 2 (Project Operations) that are not currently developed could be developed in the future. This impact would be minor as only 14 percent of TVA lands are included in these categories, and most of the parcels affected were allocated based on existing land use.

Because the land surrounding the eight reservoirs under consideration would not be allocated to the current seven category land use zones (see Table 1-1), complete alignment with current TVA policies would not occur. In the case of the six reservoirs for which land plans were previously completed, parcels would continue to be managed in accordance with their existing plan and would continue to be based on different planning methodologies with differing allocations. Approximately 56 percent of the land around these six reservoirs is committed and land use on these parcels will not change. However, for the remaining 44 percent of land that is uncommitted, requested land uses that are consistent with Forecast System designation (Fort Loudoun and Normandy) or the Multiple Use Tract Allocation methodology (Chickamauga, Kentucky, Nickajack, and Wheeler) would either be approved or denied based on a review of potential environmental impacts, TVA's Land Policy, SMP and other administrative considerations. Wilson and Great Falls reservoirs were not previously planned; however, 99 percent of lands around Wilson Reservoir is committed and all of the TVA land around Great Falls Reservoir is committed.

The primary impacts to land use associated with Alternative A result from the lack of a comprehensive plan to guide consideration of land use requests that would be applied in a consistent manner across all TVA reservoirs. Over the long term, absence of comprehensive reservoir-wide land plans may result in land uses that do not fully optimize the goals of multiple use and stewardship to which TVA strives. However as any unplanned parcels that are not committed would be managed consistent with current plans for the reservoir as well as TVA's Land Policy, SMP and other administrative regulations, this impact would be minor.

In addition, the CVLP would not be updated to reflect the allocations as proposed under the current Single Use Parcel Allocation methodology. The target ranges for each land use zone established in the CVLP enable TVA and the public to consider future allocations across the reservoir system and determine whether too much or too little attention is being given to particular land uses on a system-wide basis. Therefore, implementation of Alternative A would impact the ability to accurately achieve the desired overall balance of shoreline development, recreational use, sensitive and natural resource management, and other land uses on a system-wide basis.

3.2.2.2 Alternative B – Proposed Land Use Plan Alternative

Under this alternative, lands managed by TVA would be placed into one of the seven land use zones shown on Table 1-1 that best fits the existing land use as determined in the pre-allocation process described in Section 2.4. Implementation of Alternative B would result in changes of zone allocation on a total of 25,558 acres of land, (roughly 18 percent of the 138,321.2 acres of TVA-managed land) on the eight reservoirs evaluated in this EIS.

Approximately 7 percent of the proposed allocations reflect existing land use agreements and commitments. Reallocations proposed for approximately 11 percent of TVA managed land are not based on existing agreements or commitments. These proposed allocations are identified in Appendix D (Tables D-7 through D-11) and additional detail regarding proposed allocations by reservoir is available in Appendix B of Volumes II through IX.

Notable land use changes proposed for each reservoir are summarized below:

- **Chickamauga RLMP** (16,061.4 acres) – TVA proposes changes to numerous parcels currently allocated as Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation). Fewer Zone 3 parcels would be allocated because existing information on resources indicates there are no known sensitive resources present. As a result, more parcels would be allocated for Zone 4 (Conservation) and Zone 6 (Developed Recreation). In addition, minor changes to Zone 2 (Project Operations), Zone 5 (Industrial) and Zone 7 (Shoreline Access) are proposed.

- **Fort Loudoun RLMP** (1,513.2 acres) – TVA proposes major changes to Zone 6 and Zone 7 allocations. Zone 6 (Developed Recreation) changes are proposed because previous planning efforts underestimated the amount of lands utilized for recreation or that are covered by existing recreational agreements. Zone 7 (Shoreline Access) changes are proposed to more accurately reflect the lands encumbered with shoreline access rights.

- **Great Falls RLMP** (362.4 acres) – TVA proposes to allocate most of the relatively small area of TVA-managed lands on this reservoir for use as Zone 6 (Developed Recreation), based on historical and proposed recreation operations of the State of Tennessee. Such use would also be consistent with the current management of the adjacent Rock Island State Park.

- **Kentucky RLMP** (74,713.5 acres) – The majority of TVA lands addressed in this planning effort are located on Kentucky Reservoir. TVA proposes substantive changes to allocations of Zone 3 and 4 parcels (Sensitive Resource Management and Natural Resource Conservation) on Kentucky Reservoir based on new information indicating the presence or absence of known sensitive resources. More lands would be allocated to Zone 3 (an increase of 5 percent) and fewer lands would be allocated as Zone 4 (a decrease of almost 10 percent). Minor increases to Zones 2 (Project Operations), Zone 5 (Industrial), Zone 6 (Developed Recreation) and Zone 7 (Shoreline Access) allocations are also proposed.

- **Nickajack RLMP** (3,604.7 acres) – TVA proposes changes to Zones 2 (Project Operations), 3 (Sensitive Resource Management) and 4 (Natural Resource Conservation) parcel allocations. The proposed increase in Zone 2 (Project Operations) lands is primarily the result of previous underestimates in the amount of lands encumbered by roadways. The allocation change to one large parcel (Marion Memorial Bridge) from Zone 4 to Zone 3 would result in the greatest allocation change under the RLMP, resulting in a large increase in Zone 3 (Sensitive Resource Management) lands and fewer lands allocated as Zone 4 (Natural Resource Conservation). Minor changes to Zone 5, Zone 6, and Zone 7 (Industrial, Developed Recreation, and Shoreline Access, respectively) allocations are proposed.

- **Normandy RLMP** (4,797.2 acres) – TVA proposes minor adjustments to parcel allocations across each land use zone. The greatest change would result in a decrease in Zone 3 (Sensitive Resource Management) parcels, largely due to reallocating one tract from Zone 3 to Zone 4 (Natural Resource Conservation) because new information indicates that sensitive resources are not known to be present in the area.

- **Wheeler RLMP** (36,045.2 acres) – TVA proposes changes to Zone 2 (Project Operations), Zone 3 (Sensitive Resource Management), Zone 4 (Natural Resource Conservation), and Zone 6 (Developed Recreation) allocations. TVA would increase allocations to Zone 2 (Project Operations) to more accurately account for areas encumbered by roadways and road easements (an increase of almost 10 percent). Fewer lands would be allocated to Zone 3 (Sensitive Resource Management) because new information indicates that sensitive resources are not known to be present on numerous tracts. Some of these parcels would be reallocated for Zone 4 (Natural Resource Conservation) use (5 percent). TVA would slightly decrease Zone 6 (Developed Recreation) allocations based on populations and recreation demand trends in the area.

- **Wilson RLMP** (1,223.4 acres) – TVA's proposed RLMP reflects circumstances unique to Wilson Reservoir. Approximately 87 percent of areas would be allocated for Zone 2 (Project Operations) to reflect lands encumbered by transmission lines and utility easements and lands set aside to support future power operations of the dam (and potential navigation in and around the Wilson Lock and Fleet Harbor). Almost 13 percent of lands would allocated as Zone 6 (Developed Recreation) and a small tract would be allocated for Zone 7 (Shoreline Access).

In total, 93,690.5 acres would be allocated to Zone 4 (Natural Resource Conservation). This represents a decrease of 3,300.5 acres (2.5 percent) relative to the No Action Alternative. The amount of land allocated to Zone 3 (Sensitive Resource Management), 13,289.9 acres would also be slightly lower (2,289.7 acres or 1.7 percent) under Alternative B. However, approximately 77 percent of the total number of acres of TVA land around the eight reservoirs is allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation) under Alternative B. In turn, the amount of land allocated to Zone 2 (Project Operations), Zone 5 (Industrial) and Zone 7 (Shoreline Access) would increase by less than 1 percent, and the land allocated to Zone 6 (Developed Recreation) would increase by 1.4 percent under this alternative.

The proposed changes in land use allocations are minor and generally correspond to a "re-alignment" to reflect current land uses and conditions on each parcel. Consequently, actual direct or indirect adverse impacts to land use are considered to be minor. Implementation of comprehensive, long-term land use plans would beneficially impact land use by providing clear guidance designed to optimize land use and stewardship on these reservoirs. In addition, an updated CVLP would achieve the desired overall balance of shoreline development, recreational use, sensitive and natural resource management, and other uses land uses on a system-wide basis.

3.3 Prime Farmland

3.3.1 Affected Environment

The 1981 Farmland Protection Policy Act and its implementing regulations (7 Code of Federal [CFR] Part 658) require all federal agencies to evaluate impacts to prime and unique farmland prior to permanently converting land to a use incompatible with agriculture. Prime farmland is defined by the U.S. Department of Agriculture (USDA) as land that has the best combination of chemical and soil physical characteristics for meeting the nation's short- and long-range needs for food and fiber. Prime farmland can consist of cultivated land, pastureland, or forestland, but it is not urban, built-up land or covered by water.

The states of Alabama, Kentucky, and Tennessee have designated farmland of statewide importance that is exceptional for the production of food, feed, fiber, forage, and oil seed crops. Generally, state agencies identify farmlands of statewide importance as those areas that economically produce high yields of crops when treated and managed according to acceptable farming methods. Some may produce as high a yield as prime farmlands if conditions are favorable. In some states, additional farmlands of statewide importance may include tracts of land that have been designated for agriculture by state law. Consideration for protection under the Farmland Protection Policy Act extends to farmland of statewide importance. To evaluate effects to prime farmland and farmland of state importance, TVA identifies soil classifications using the USDA, Natural Resources Conservation Service (NRCS) Web Soil Survey.

About 35,833.4 acres of prime farmland and 10,866 acres of farmland of statewide importance occur around the eight reservoirs (Table 3-5). All of the reservoirs include soils designated as prime farmland. However, no land of statewide importance designation occurs around Chickamauga, Great Falls, Nickajack, or Normandy reservoirs. Detailed descriptions prime farmland on land allocated to each zone are provided in the individual RLMPs (Volumes II through IX).

Table 3-5. Area and Number of Parcels Having Prime Farmland or Farmland of Statewide Importance on the Eight RLMPs

Reservoir	Prime Farmland		Farmland of Statewide Importance	
	Acres	No. Parcels[1]	Acres	No. Parcels[1]
Chickamauga	6,646.6	2,049.0	0	0
Fort Loudoun	240.0	174.0	1,177.0	58.0
Great Falls	23.2	11.0	0	0
Kentucky	12,824.5	2,906.0	643.0	134.0
Nickajack	739.3	242.0	0	0
Normandy	640.4	225.0	0	0
Wheeler	14,381.3	2,759.0	8,948.8	1,198.0
Wilson	338.1	13.0	97.2	18.0
Total	**35,833.4**	**8,379.0**	**10,866.0**	**1,408.0**

[1] Some parcels may contain both prime farmland and farmland of statewide importance

Source: USDA NRCS 2016b.

The geographic extent of the reservoirs considered in this EIS includes seven counties in Alabama, three in Kentucky, and 25 in Tennessee. Prime farmland is found in each of these counties, comprising between 6 and 62 percent of the total area in a county. The proportion of total prime farmland within these counties which support agriculture uses ranges from 12.8 percent in Polk County, Tennessee to 76.7 percent in Bedford County, Tennessee (Table 3-6).

Table 3-6. Prime Farmland and Farming Trends in the Counties Where the Reservoirs are Located

County	Percent of Total Area in Farms (2012)	Acres Prime Farmland	Percent Prime Farmland	Percent Change from 1992 to 2012		
				Number of Farms	Land in Farms (acres)	Average Size of Farms (acres)
Alabama						
Colbert	40.3	104,533	26.2	40.8	10.6	-21.6
Lauderdale	49.5	194,121	42.2	28.3	4.8	-18.6
Lawrence	55.2	155,615	33.9	69.5	40.6	-17.4
Limestone	68.8	223,955	57.6	35.2	19.0	-11.8
Madison	40.8	270,183	51.9	18.6	-6.7	-21.3
Marshall	45.0	140,584	35.2	10.3	14.1	2.9
Morgan	41.1	156,780	40.9	9.6	-2.1	-10.9
Kentucky						
Livingston	61.5	37,474	17.1	6.6	3.3	-2.9
Lyon	30.4	107,269	22.7	-10.2	-15.9	-6.4
Marshall	49.2	157,484	32.8	26.6	24.6	-1.5
Tennessee						
Bedford	76.7	42,672	14.0	12.1	8.8	-2.9
Benton	34.8	17,503	6.3	30.4	39.6	7.3
Blount	28.2	47,213	17.6	-3.2	4.7	8.4
Bradley	41.2	48,810	23.0	14.6	-5.7	-17.7
Coffee	52.8	173,063	62.1	6.8	9.4	2.5
Decatur	36.2	59,741	27.0	-8.6	-11.0	-2.6
DeKalb	46.0	42,175	20.0	-17.8	-6.5	13.7
Hamilton	15.1	67,148	18.2	0.4	-16.4	-17.0
Hardin	34.1	132,778	34.8	13.9	14.5	0.5
Henry	56.9	50,676	13.3	6.0	6.8	0.8
Houston	39.3	31,195	23.6	40.2	13.3	-19.0
Humphreys	36.3	64,694	18.2	18.4	3.4	-12.3
Knox	20.1	63,246	18.8	-21.2	-30.7	-11.1
Loudon	47.3	21,306	13.5	-4.2	-5.8	-1.9
Marion	15.9	42,471	12.6	0.7	0.0	-1.1
McMinn	44.5	41,172	14.9	7.5	-1.0	-7.9
Meigs	42.3	22,834	16.4	-0.6	-6.0	-5.1
Perry	18.0	25,351	9.4	12.3	-10.1	-19.8
Polk	12.8	21,856	7.7	1.6	13.4	11.2
Putnam	37.3	54,151	21.0	-16.9	-18.0	-0.9

County	Percent of	Acres	Percent	Percent Change from 1992 to 2012		
Rhea	28.6	23,853	11.1	18.8	9.9	-7.9
Stewart	20.6	64,106	20.3	2.3	12.7	10.2
Warren	59.0	107,163	38.5	-14.5	-1.2	15.9
Wayne	28.4	62,231	13.2	7.6	6.7	-1.0
White	50.5	41,140	9.9	-11.1	-1.7	10.1

Source: USDA NRCS 2016b.

Agriculture census data show that during the 20 years between 1992 and 2012, the number of farms in all of the counties in Alabama has increased between approximately 10 and 70 percent (see Table 3-6). During the same time period, the number of acres of land in farms increased in all of the Alabama counties expect for Madison and Morgan, which decreased almost 7 and 2 percent, respectively. While the amount of total land in agricultural use has increased overall, the average size of farms has decreased in every county except Marshall. The largest decrease in farm size was in Colbert County, which went down almost 22 percent.

Over the past 20 years, the number of farms in most of the counties in Kentucky and Tennessee increased. Throughout these counties, there was also an overall increase in the total land in agricultural use. However, just as in Alabama, the average size of farms decreased in most counties within these two states. The county with the largest increase in farm size was Warren County, Tennessee, which went from an average size of 126 acres to 146 acres, a 16 percent increase.

3.3.2 Environmental Consequences

Effects to prime farmlands can occur when actual or designated land uses are changed to other uses or designations, such as industrial or recreational development, which preclude the property being used for agricultural purposes. Generally, prime farmland on properties located in Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation) are not subject to adverse impacts because those properties would be retained in a relatively “natural” state and not be converted to other land uses, preserving any prime farmland. However, prime farmland on parcels allocated to Zones 2, 5, 6, or 7 (Project Operations, Industrial, Developed Recreation or Shoreline Access, respectively) is subject to potential conversion because land in these zones could be devoted to nonagricultural uses, such as industrial development, developed recreation, and water access.

Under any of the alternatives, proposed actions involving the transfer of land for development that contains any acreage of soil with prime farmland could require completion of a Farmland Conversion Impact Rating (Form AD 1006) and coordination with the Natural Resource Conservation Service. This impact rating is based on soil characteristics as well as site assessment criteria, such as agriculture and urban infrastructure, support services, farm size, compatibility factors, on-farm investments, and potential farm production loss to the local community and county. Site assessment scores tend to be higher for the more rural locations. Sites receiving scores greater than 160 points (out of a possible 260) are given greater consideration of protection so that agricultural use can be preserved.

Prime farmland allocated to each management zone under both alternatives is shown in Table 3-7. The potential for direct and indirect impacts to prime farmland and farmland of statewide importance under each of the alternatives is discussed below.

Table 3-7. Prime Farmland and Land of Statewide Importance Allocated to Each Land Management Zone Under Alternatives A and B

Zone	Alternative A		Alternative B	
	Prime Farmland[1] (acres)	Land of Statewide Importance (acres)	Prime Farmland (acres)	Land of Statewide Importance (acres)
Zone 2 (Project Operations)	2,439.5	554.4	3,184.4	603.3
Zone 3 (Sensitive Resource Management)	5,891.7	1,561.9	3,952.7	868.6
Zone 4 (Natural Resource Conservation)	23,212.0	7,074.9	23,635.7	7,436.5
Zone 5 (Industrial)	379.3	126.9	539.2	381.4
Zone 6 (Developed Recreation)	2,104.7	310.1	2,529.6	329.5
Zone 7 (Shoreline Access)	1,781.4	60.9	1,991.7	69.7
Total	**35,808.6**	**9,689.1**	**35,833.3**	**9,689.0**

[1] Includes 25 acres on parcels or portions of parcels that were not previously planned

The total area of prime farmland associated with the eight RLMPs is small (about 1.0 percent) relative to the almost 3 million acres of prime farmland occurring in the counties around the reservoirs. The majority of the parcels around the reservoirs, including those containing prime farmland, are already committed to land uses other than agriculture. Regionally, the number of farms and the acres of land in farms are increasing in most counties, although the average size of farms is generally in decline (see Table 3-6).

3.3.2.1 Alternative A – No Action Alternative

Under Alternative A, approximately 6,705 acres of prime farmland and 1,052 acres of farmland of statewide importance occur on parcels allocated to Zones 2, 5, 6, and 7 (Project Operations, Industrial, Developed Recreation, and Shoreline Access, respectively), where disturbance of soils is most likely. Approximately 7 percent of prime farmland around the eight reservoirs occurs on land allocated to Zone 2 (Project Operations) which are associated with TVA operations such as dam reservations and public works projects. Current soil mapping of prime farmland soils does not account for existing developed uses that may have previously disturbed and potentially converted prime farmland. Therefore, in many instances, soil-disturbing impacts to parcels committed to developed uses, including Zone 2 (Project Operations), have already occurred and allocation to these zones would not represent an additional future impact to prime farmland. Approximately 81 percent of prime farmland occur on parcels allocated to Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation); impacts to prime farmland are unlikely in these areas.

Under Alternative A, the greatest potential to adversely affect prime farmland and farmland of statewide importance would be on parcels allocated to Zones 2, 5, 6, and 7 (Project

Operations, Industrial, Developed Recreation and Shoreline Access, respectively). As future requests for land uses on these parcels are submitted to TVA, project-specific environmental reviews are expected to identify and minimize adverse impacts to prime farmland and farmland of statewide importance. However, because the proportion of prime farmland and farmland of statewide importance is small, changes this impact would be minor.

3.3.2.2 Alternative B – Action Alternative

Under Alternative B, approximately 8,245 acres of prime farmland and 1,384 acres of farmland of statewide importance occur on parcels allocated to Zones 2, 5, 6, and 7 (Project Operations, Industrial, Developed Recreation and Shoreline Access, respectively), where disturbance of soils is most likely. Approximately 27,439 acres of prime farmland and 8,306 acres of farmland of statewide importance would occur on parcels allocated to Zones 3 and 4. Compared to the No Action Alternative, an additional 1,522 acres of prime farmland and 332 acres of farmland of statewide importance would be allocated to Zones 2, 5, 6, and 7 (Project Operations, Industrial, Developed Recreation and Shoreline Access, respectively), which would make these areas subject to potential future development uses that are incompatible with agriculture. Overall, this reallocation accounts for approximately 4.2 percent of the total land area within the eight RLMPs. The greatest potential impact to prime farmland and farmland of statewide importance is attributed to the reallocation of 2,632 acres of land that is currently zoned for Zone 3 (Sensitive Resource Management). However, under this alternative 424 acres of prime farmland and 362 acres of farmland of statewide importance would be allocated to Zone 4 (Natural Resource Conservation). Additionally, as described in Section 3.2, the proposed changes in land use allocations generally correspond to a “re-alignment” to reflect current land uses and conditions on each parcel.

As described under Alternative A, future requests for land uses would be subject to project-specific environmental review. Adverse impacts to prime farmland are expected due to the increase in acreages within land use zones where disturbance of soils is most likely. However, for the reasons stated above, the impact to prime farmland related to changes in land use under Alternative B would be greater than Alternative A, however still minor.

3.4 Recreation

3.4.1 Affected Environment

TVA-managed lands in the eight RLMPs include approximately 138,321 acres, some of which provide a high-quality and diverse array of developed and dispersed recreation opportunities. Developed recreation includes campgrounds, lodges, marinas, boat ramps, parks, swimming pools and beaches, visitor buildings and other day use facilities and golf courses. Dispersed recreation consists of passive informal activities such as hunting, hiking, nature observation, primitive camping, and bank fishing.

In 2005, TVA developed a recreation strategic plan aimed at collaboratively enhancing recreational opportunities and addressing unmet recreational needs while managing the resources of the Tennessee River system (TVA 2005b). This strategy laid out guiding principles for how to best design and develop recreation opportunities.

The inventory of recreation areas in the eight RLMPs includes public and private recreation areas. Public facilities are owned and/or operated by TVA or other government entities, whereas private facilities are commercial areas operated for profit and occur on private

land, on TVA land with land right agreements, or on combinations of private and public lands under agreement.

Recreation facilities and amenities on TVA shoreline properties adjacent to the eight reservoirs include: 74 campgrounds, 79 marinas, 234 developed boat launching ramps, and many day use facilities such as picnic areas, swimming beaches, ball fields, fishing piers, and golf courses. Detailed descriptions of recreation areas are provided in individual RLMPs (Volumes II through IX).

Approximately 240 parcels in the eight RLMPs contain developed recreation facilities (Table 3-8). These facilities primarily occur on parcels allocated as Zone 6 (Developed Recreation) or Zone 2 (Project Operations).

Table 3-8. Developed and Dispersed Recreation in the Eight RLMPs

Reservoir	Number of Parcels with Developed Recreation Sites	Number of Parcels with Dispersed Recreation Use
Chickamauga	64	124
Fort Loudoun	29	23
Great Falls	2	2
Kentucky	100	191
Nickajack	11	15
Normandy	5	17
Wheeler	26	75
Wilson	4	4
Total	**240**	**451**

TVA-managed lands around the eight reservoirs also offer opportunity for dispersed recreation. Dispersed recreation typically occurs on parcels allocated as Zone 2 (Project Operations), Zone 3 (Sensitive Resource Management), or Zone 4 (Natural Resource Conservation, respectively), and on undeveloped land allocated to Zone 6 (Developed Recreation) or areas of Zone 7 (Shoreline Access) where not developed or posted. Based on information included in individual parcel descriptions, 451 parcels in the eight RLMPs currently receive significant levels of dispersed recreation use (see Table 3-8).

3.4.2 Environmental Consequences

Developed recreation occurs on committed parcels allocated to Zone 6 (Developed Recreation). These parcels typically have an existing land use agreement for a park, campground, marina, or other recreation purposes. Additional developed recreation is allowed on lands allocated to Zone 2 (Project Operations), such as where the dam reservation is located. Opportunities for dispersed recreation occur primarily on parcels allocated to Zone 4 (Natural Resource Conservation) and Zone 3 (Sensitive Resource Management). However, dispersed recreation also occurs on some parcels allocated to Zones 2 (Project Operations), Zone 6 (Developed Recreation), and 7 (Shoreline Access).

No existing developed recreation facilities would be negatively affected by either alternative. There may be minimal changes in opportunities for dispersed recreation, which can occur on all land management zones between the alternatives.

3.4.2.1 Alternative A

As summarized in Table 2-1, 5.8 percent (8,064.9 acres) of TVA land on the eight reservoirs are allocated to Zone 6 (Developed Recreation). Unless otherwise posted, approximately, 81.4 percent (112, 570.6 acres) of land would be allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation) which could support dispersed recreation. Relative to Alternative B, a higher percentage of land would be available for dispersed recreation.

Alternative A includes a lower percent of land designated for developed recreation than Alternative B. Implementation of this alternative would continue to benefit developed recreation by supporting a diversity of existing sites as well as identifying areas for future opportunities for development.

Alternative A would not affect current developed recreation facilities but would have a minor negative impact to potential future developed recreation because of a lower amount of land allocated to Zones 2 and 6 (Project Operations and Developed Recreation) as compared to Alternative B. For dispersed recreation, Alternative A is anticipated to have a minor beneficial dispersed recreation impact in comparison to Alternative B. Overall, impacts to recreation would be minor due to the relatively small amounts of land affected in comparison to the total TVA lands covered by the eight RMLPs.

3.4.2.2 Alternative B

Under Alternative B, the reallocation of parcels would enhance recreational opportunities as certain parcels would be reallocated based on previous underestimation of amount of land utilized for recreation, verification of recreation areas covered by existing agreements and suitability for recreational activities. As a result, this alternative would have a minor net increase in percentage and acreage of lands allocated to Zone 6 (Developed Recreation) (increase of 1,643.9 acres or 1.4 percent) and to Zone 2 (Project Operations) (increase of 1,621.9 acres or 0.9 percent). Under Alternative B, approximately 7.0 percent or 9,708.8 acres of eight RLMPs would be allocated to Zone 6 (Developed Recreation). The amount of land allocated under Zone 2 (Project Operations) is approximately 7.8 percent or 10,826.5 acres.

Approximately 5,590 acres (4 percent of the eight RLMPs) would be reallocated from Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation) and would reduce opportunities for dispersed recreation. Not all lands allocated to Zone 6 (Developed Recreation) would be developed and, therefore, lands allocated to Zone 6 would be available for dispersed recreation.

The proposed changes in land use allocations are relatively minor and correspond to a "re-alignment" to reflect current land uses and conditions on each parcel. Overall, the management of recreation opportunities would benefit from the development and implementation of Alternative B as each RLMP would follow a consistent, systematic process for identifying developed and dispersed recreational opportunities on individual parcels. Due to the small percentage of lands affected, Alternative B would have a minor benefit to developed recreation (increase of 0.8 percent of lands allocated to Zone 6 – Developed Recreation) and a minor negative impact on dispersed recreation opportunities due to a small reduction in lands allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation).

3.5 Terrestrial Ecology

3.5.1 Affected Environment

3.5.1.1 Plant Communities

Vegetation classes commonly found around the reservoirs included in the eight RLMPs include deciduous forest, evergreen forest, mixed evergreen-deciduous forest, shrubland, and herbaceous vegetation.

Deciduous forests and woodlands are the most common and the most diverse vegetation classes found on the parcels surrounding the reservoirs. Deciduous forests and woodlands cover approximately 38 percent of the landscape and are composed of diverse communities ranging from mesic (moist) cove hardwood forest to xeric (dry) upland oak forests. Mixed evergreen-deciduous forests occupy approximately 20 percent of the land cover and primarily consist of moist mixed-hardwood forests and dry pine and pine-oak forests. Less than 5 percent of the land cover is evergreen forests and evergreen woodlands. In addition, approximately 4 percent of the land cover is considered woody wetlands primarily located within floodplain hardwood forests. Herbaceous vegetation in the form of grasslands, hay fields, and pasture make up approximately 19 percent of the land cover. Transition areas consisting of shrub/scrub habitat makes up three percent of the land cover. Land use/land cover information was obtained from the national land cover data (Homer et al. 2015).

Invasive nonnative species of plants occur throughout the area`s surrounding the eight RLMP reservoirs. EO 13112 defines an invasive species as one that is not native to that ecosystem and whose introduction does or is likely to cause economic or environmental harm or harm to human health. Invasive nonnative plants affect native terrestrial plant communities by competing for space and resources, which ultimately could degrade botanical diversity and wildlife habitat. Invasive species are typically robust plants that are not subject to natural controls of native insects and diseases. Consequently, invasive species may spread across the landscape beyond the control of reclamation measures applied by landowners and managers on individual parcels.

The Federal Noxious Weed List of 2010 (USDA 2016) lists invasive, nonnative plant species that are regulated by federal law. Many of the TVA parcels included in the eight RLMPs contain a substantial amount of invasive nonnative species. Based on a data search conducted on the USDA NRCS PLANTS Database (USDA NRCS 2016a), hydrilla (*Hydrilla verticillata*) is the only plant contained on the Federal Noxious Weed List of 2010 as reported from the counties encompassing the eight reservoirs.

In addition, Southeastern Exotic Plant Pest Council provides a list of nonnative invasive species that could pose potential threats to native ecosystems and human health for each southeastern state. In reviewing the Tennessee, Kentucky, and Alabama exotic plant pest lists, there were a total of 46 species occurring that pose a severe threat to native ecosystems observed in the region. Table 3-9 contains a listing of invasive plants known to occur within the states containing the eight RLMPs that are considered to pose the highest threat to native eocosystems.

Table 3-9. Invasive Non-Native Species that Pose a Severe Threat Known to Occur in States Containing the Eight RLMPs

State Present[1]	Common Name	Scientific Name
AL	Alligatorweed	*Alternanthera philoxeroides*
AL	Aquarium water-moss	*Salvinia molesta*
TN, KY	Asian bittersweet	*Celastrus orbiculatus*
TN, KY	Autumn olive	*Elaeagnus umbellata var. parviflora*
KY	Bush honeysuckle (amur)	*Lonicera maackii*
KY	Callery pear (Bradford)	*Pyrus calleryana*
TN	Cheat grass	*Bromus tectorum*
KY	Chickweed	*Stellaria media*
TN, KY, AL	Chinese privet	*Ligustrum sinense*
KY	Chinese silver grass	*Miscanthus sinensis*
AL	Chinese wisteria	*Wisteria sinensis*
TN, KY	Chinese yam	*Dioscorea oppositifolia*
AL	Cogongrass	*Imperata cylindrica*
TN	Common privet	*Ligustrum vulgare*
KY	Common reed	*Phragmites australis*
TN	Common St. John's-wort	*Hypericum perforatum*
AL	Common water hyacinth	*Eichhornia crassipes*
KY	Crown vetch	*Coronilla varia*
AL	English ivy	*Hedera helix*
AL	Eurasian water milfoil	*Myriophyllum spicatum*
KY	Barlic mustard	*Alliaria petiolata*
TN, AL	Hydrilla	*Hydrilla verticillata*
AL	Japanese climbing fern	*Lygodium japonicum*
TN, KY, AL	Japanese honeysuckle	*Lonicera japonica*
TN, KY	Japanese knotweed	*Polygonum cuspidatum*
TN, KY, AL	Japanese stiltgrass	*Microstegium vimineum*
TN, KY	Johnson grass	*Sorghum halepense*
KY	Kentucky fescue	*Festuca arundinacea*
TN	Korean clover	*Kummerowia stipulacea*
TN, KY, AL	Kudzu	*Pueraria montana var. lobata*
TN, AL	Mimosa	*Albizia julibrissin*
TN, KY, AL	Multiflora rose	*Rosa multiflora*
KY	Musk thistle	*Carduus nutans*
AL	Parrot feather watermilfoil	*Myriophyllum aquaticum*
KY	Poison hemlock	*Conium maculatum*
TN, KY	Princess tree	*Paulownia tomentosa*
TN, KY	Purple loosestrife	*Lythrum salicaria*
TN, KY, AL	Sericia lespedeza	*Lespedeza cuneata*
TN	Shrubby bushclover	*Lespedeza bicolor*
AL	Tallowtree	*Triadica sebifera*
TN, KY	Tree of heaven	*Ailanthus altissima*
AL	Water lettuce	*Pistia stratiotes*
KY	Winged euonymus (burning	*Euonymus alatus*

State Present[1]	Common Name	Scientific Name
	bush)	
KY	Winter creeper	*Euonymus fortunei*
KY	White sweet clover	*Melilotus alba*
KY	Yellow sweet clover	*Melilotus officinalis*

[1] AL=Alabama, KY=Kentucky, TN=Tennessee; State is listed if this species was contained on the Severe Threat list in Tennessee or Kentucky, or on the Category 1 list for Alabama, The Severe Threat and Category 1 lists contain plants with the highest potential for adverse impacts to native communities.

Sources: Tennessee Exotic Plant Pest Council 2009; Kentucky Exotic Pest Plant Council 2015; Alabama Invasive Plant Pest Council 2012

All of these species have the potential to adversely impact the native plant communities because of their potential to spread rapidly and displace native vegetation. TVA considers all of the Severe Threat (Tennessee and Kentucky) and Category 1 (Alabama) species a severe threat to local plant communities.

In addition to invasive or non-native plant species discussed above, there are several exotic, non-native, and/or pest insect species and plant diseases that are known to occur within the counties encompassing the eight reservoirs. These insects and diseases can have devastating impacts on native plant communities and human crops/fruits. The insects include: Japanese beetle, (*Popillia japonica*), brown marmorated stink bug (*Halyomorpha halys*), emerald ash borer (*Agrilus planipennis*), hemlock woolly adelgid (A*delges tsugae*), kudzu bug (*Megacopta cribraria*), southern pine beetle (*Dendroctonus frontalis*), spotted wing drosophila (*Drosophila suzukii*), spruce beetle (*Dendroctonus rufipennis*), and sugarcane aphid (*Melanaphis sacchar*i) (EDDMapS 2016). These species all have the potential to pose problems to native vegetation, wildlife, crops, landscaping and gardens, and/or overall ecosystems due to the lack of natural predators or diseases to help control their populations giving them the ability to out-compete native species.

The following plant diseases are also known to occur in the counties containing the eight reservoirs: butternut canker (*Sirococcus clavigignenti-juglandacearum*), dogwood anthracnose (*Discula destructive*), fusiform rust (*Cronartium quercuum* f.sp. *fusiforme*), Heterobasidion root rots (*Heterobasidion* spp.), Neonectria canker (*Neonectria faginata*), oak wilt (*Ceratocystis fagacearum*), thousand cankers disease (*Geosmithia morbida*), and white pine blister rust (*Cronartium ribicola*). Many of these diseases target certain plant species or groups of species, and can have serious impacts to local populations of those plants and trees.

3.5.1.2 Wildlife Communities

The eight reservoirs are located in five ecoregions, Ridge and Valley, Interior Plateau, Southwestern Appalachians, Southeastern Plains, and Mississippi Loess Plains. The variety of land forms, soils, climate, and geology across these ecoregions support an extremely diverse assemblage of animals, including migratory birds of conservation concern. The array of microclimates and diversity of habitats are associated with high levels of species richness and species with limited geographic ranges.

The Ridge and Valley ecoregion contains long stretches of ridges with adjacent valleys that run in a southwestern-to-northeastern direction (USGS 2016). In this ecoregion, deciduous and mixed evergreen- deciduous forests are interspersed with agriculture and urban

dominated areas. Wildlife ranges from forest-dependent species to those that tolerate highly modified habitats.

The Interior Plateau ecoregion is a series of grassland plateaus and forested uplands that are generally lower in elevation than the Appalachian Mountains to the east but higher than the plains to the south. This region contains relatively flat and fertile lowlands, including the Bluegrass area of central Kentucky and the Nashville Basin in central Tennessee. The Pennyroyal Plateau in south-central Kentucky and northern Tennessee is a dense agricultural area that also contains a distinctive “flatwood” ecosystem. The area is characterized by oak forests and wet conditions that are caused by an underlying hard, dense fragipan soil. Rapid subsurface drainage occurs in sinkhole areas such as south-central Kentucky where extensive cave systems wind through the karst limestone landscape (USGS 2016).

The Southwestern Appalachians ecoregion consists of open low mountains, with some areas containing steep slopes. Approximately three-fourths of the ecoregion is covered by forest, primarily mixed oak communities and shortleaf pines. Agricultural lands are found on lower slopes and valley floors (USGS 2016).

The Southeastern Plains ecoregion is the largest ecoregion in the eastern U.S. The irregular, relatively flat plains of the ecoregion are covered by a mosaic of cropland, pasture, forest, and wetland. The ecoregion is characterized by long growing seasons and abundant rainfall, but the relatively poor sandy soils found in much of the ecoregion limit agricultural competitiveness with many other regions. Natural forests of pine, hickory, and oak once covered most of the ecoregion, but much of the natural forest cover has been replaced by heavily managed timberlands (USGS 2016).

The Mississippi Valley Loess Plains extends from western Kentucky south to Louisiana. The topography consists primarily of irregular plains. This region contains a highly erodible, thick layer of loess, a unique geologic deposit consisting almost entirely of wind-transported, silt-sized grains of quartz and other common minerals. Forest, agriculture, and developed land account for more than 90 percent of the land cover in the ecoregion (USGS 2016).

Several forest types are found on TVA public lands within the eight RLMPs. Deciduous forests provide a variety of habitats for wildlife. Oak-hickory forest is the most abundant forest type in the eastern U.S. and is prevalent on much of the land within the eight RLMPs. Numerous bird species nest in deciduous forests including wild turkey, whip-poor-will, ruby-throated hummingbird, red-eyed vireo, wood thrush, gray catbird, black-throated green warbler, black-and-white warbler, ovenbird, hooded warbler, and scarlet tanager. Several additional migratory bird species of concern utilize these habitats in part or all of the region including black-billed cuckoo, cerulean warbler, chuck-will’s widow, Kentucky warbler, peregrine falcon, red-headed woodpecker, wood thrush and worm-eating warbler (USFWS 2016a). Common mammal species found in deciduous forests include black bear, white-tailed deer, eastern red bat, eastern chipmunk, eastern gray squirrel, southern flying squirrel, white-footed mouse, southern red-backed and woodland voles, short-tailed shrew, gray fox, and bobcat.

Evergreen and evergreen-deciduous forests provide nesting habitat for woodland birds including pine and yellow-throated warblers, great crested flycatcher, and chuck-will’s-widow. Birds that winter in this forest type include white-breasted nuthatch, and pine siskin.

Several additional migratory bird species of concern utilize these habitats including black-billed cuckoo, black-capped chickadee, brown-headed nuthatch, Canada warbler, chuck-will's widow, Kentucky warbler, fox sparrow, northern saw-whet owl, olive-sided flycatcher, prairie warbler, and red crossbill (USFWS 2016a). Other animals that inhabit evergreen and evergreen-deciduous forests but are not restricted to them include white-tailed deer, wild turkey, black bear, eastern mole, eastern kingsnake, smooth earth snake, eastern fence lizard, and six-lined racerunner. Additionally, streams, wetlands, and other seasonally wet areas in this forest type provide habitat for a variety of salamanders, frogs, and toads.

Nonforested habitat within the eight RLMPs includes agricultural fields including hay fields and pastures, grasslands, barrens and transmission line rights-of-ways where tree clearing is required. These early successional habitats provide habitat for a variety of bird species including eastern bluebird, eastern meadowlark, American crow, and red- tailed hawk. Several additional migratory bird species of concern utilize these habitats in this area including American kestrel, Bewick's wren, dickcissel, Henslow's sparrow, Le Conte's sparrow, sedge wren, short-eared owl, and willow flycatcher (USFWS 2016a). Amphibians and reptiles that use these habitats include spring peeper, chorus frog, and common garter snake.

Bird and mammal diversity greatly increases at edge habitats, especially forested areas bordered by early successional habitats. Birds commonly found at these edge habitats include wild turkey, great crested flycatcher, white-eyed vireo, Carolina wren, blue-gray gnatcatcher, brown thrasher, blue-winged warbler, prairie warbler, common yellowthroat, yellow-breasted chat, indigo bunting, eastern towhee, field and song sparrow, and orchard oriole. Several additional migratory bird species of concern utilize these habitats in this area including Bachman's sparrow, Bell's vireo, Bewick's wren, blue-winged warbler, dickcissel, loggerhead shrike, Mississippi kite, peregrine falcon, red-headed woodpecker, and willow flycatcher (USFWS 2016a). Mammals expected at edges include eastern cottontail, woodchuck, eastern harvest mouse, red fox, coyote, long-tailed weasel, and striped skunk.

Riparian corridors along streams provide nesting habitat for Acadian flycatcher and northern parula. Many additional migratory bird species of concern utilize these habitats in this area including bald eagle, Bell's vireo, Bewick's wren, least bittern, Louisiana waterthrush, Mississippi kite, prothonotary warbler, and willow flycatcher (USFWS 2016a). Common amphibians found in the riparian zones include green frog, American bullfrog, northern cricket frogs, eastern narrowmouth toad, and eastern red-spotted newt. Reptiles include northern water snake, common snapping turtle, and painted turtles. Common mammals include mink, muskrat, raccoon, and American beaver.

Seepages, streams, and temporary ponds in deciduous forests provide habitat for numerous amphibians including American and Fowler's toads; green, northern cricket, and other frogs; spotted and other salamanders, including several species with limited ranges. Reptiles commonly found in deciduous forests, especially near water, include eastern fence lizard, ground skink, five-lined skink, eastern box turtle, eastern worm snake, black racer, and ring-necked snake.

The reservoirs provide abundant wetlands, including wooded swamps and open water habitats, and associated riparian (shoreline) zones that are used by a variety of wildlife. Common species include great blue heron, green heron, belted kingfisher, common yellowthroat, and northern parula. Many additional migratory bird species of concern utilize these habitats in this area including American bittern, bald eagle, least bittern, Louisiana

waterthrush, Mississippi kite, prothonotary warbler, rusty blackbird, sedge wren, short-eared owl, and willow flycatcher (USFWS 2016a). Over 70 heron colonies occur within the area of the eight RLMPs. Shallow embayments, especially those with emergent vegetation, provide habitat for waterfowl. Common waterfowl include wood ducks, Canada geese, and mallards. Other waterfowl present include American black duck, gadwall, green-winged teal, ring-necked duck, lesser scaup, common goldeneye, bufflehead, hooded merganser, and common merganser.

Shorebird use of the reservoirs is limited to shallow embayments or exposed mud flats that would provide suitable foraging areas. Species such as least sandpiper, which forage along the margins of reservoirs, and killdeer, which are not restricted to foraging on mudflats, are commonly observed on the TVA parcels. Other species observed on area mudflats include pectoral and spotted sandpipers, and uncommon species including ruddy turnstone, dowitchers, wimbrel, black-necked stilt, American avocet, and sanderling. Caves also provide unique habitat for certain insect and wildlife species. A total of 937 caves occur within 3 miles of the eight reservoirs and 35 caves occur on TVA parcels. The majority of the parcels containing caves are allocated to Zone 3 (Sensitive Resource Management) as threatened or endangered species have been recorded in several of these caves. Because caves are extremely fragile and biologically significant, TVA typically maintains an undisturbed 200-foot-wide buffer zone around caves.

In addition to invasive or non-native plant species, and insects and diseases that pose threats to plants and crops discussed in Section 3.5.1.1, there are several exotic, non-native, and/or pest terrestrial wildlife and insect species that are known to occur within the counties encompassing the eight reservoirs. These include Asian tiger mosquito (*Aedes albopictus*), feral cat (*Felis catus*), European starling (*Sturnus vulgaris*), and mute swan (*Cygnus olor*) (EDDMapS 2016). These species have the potential to pose problems to native wildlife and ecosystems due to their ability to out-compete native species and spread quickly. Some species, such as mute swans, feral cats, and Asian tiger mosquitoes can pose threats to human health and safety. Asian tiger mosquitoes are known to transmit various diseases to humans and mute swans can be very aggressive, especially near nests, and have been known to attack humans and pets that venture too closely.

3.5.2 Environmental Consequences

This section addresses anticipated effects to terrestrial plant and wildlife communities. Potential effects to threatened and endangered plants and animals are addressed in Section 3.7.

Analysis of the effects to terrestrial plant and wildlife communities is based upon the potential for proposed activities to result in clearing vegetation or ground disturbance (e.g., grading), which would be the primary sources of direct impacts to plant and wildlife communities. Indirect effects to plant and wildlife communities include fragmentation and isolation of suitable habitat and spread of invasive, non-native species that compete with native species. Greater magnitude of site development correlates to a greater potential for adverse impacts to terrestrial plants and wildlife. As such, land allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation, respectively) are the most protective of terrestrial habitat. Potential impacts would likely be greater from parcels allocated to Zone 2 (Project Operations) or Zone 6 (Developed Recreation) where more development and intensive land use could occur. Lands allocated to Zone 5 (Industrial) have the greatest potential to involve ground disturbance that may affect terrestrial communities. Development on land allocated to Zone 7 (Shoreline Access) would

require a limited amount of ground disturbance. Furthermore, many wildlife species may become accustomed to facilities developed on these lands, such that long-term effects to common species of wildlife are minor on lands allocated to these zones.

Table 3-10 presents a comparison of land cover types by land management zone under both of the alternatives is presented on Table 3-10. Based upon the proposed changes in allocations relative to existing land cover type, the potential for impacts to common species of plants and wildlife on lands allocated to Zones 2, 6, and 7 (Project Operations, Developed Recreation and Shoreline Access, respectively) would be primarily minor and potential impacts related to lands allocated to Zone 5 (Industrial) would be moderate due to the potential intensity of use on these lands. For Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation), where acreages of protected forest and other potential plant and wildlife habitats are reduced through the allocation of these areas to other uses, the overall impacts were considered minor to moderate depending on the overall amount of habitat potentially lost.

Under any of the alternatives, site-specific environmental reviews would be conducted when development projects are proposed in the future. Such reviews would evaluate the potential for project-specific effects to plant and wildlife communities. Additionally, to minimize the potential for introduction of invasive plant species on TVA-owned properties, any proposed development project would implement the following requirements:

- Landscaping activities would not include the use of invasive plants listed on the Tennessee, Kentucky, or Alabama lists of invasive or exotic pest plants (Tennessee Exotic Plant Pest Council 2009; Kentucky Exotic Pest Plant Council 2015; and Alabama Invasive Plant Pest Council 2012).
- Revegetation and erosion-control work would utilize seed mixes comprised of native species or noninvasive, nonnative species.

Table 3-10. Comparison of Land Cover Types by Land Management Zone by Alternative

Land Cover Type	Allocations by Zone and Alternative (Acres)											
	Zone 2 Project Operations		Zone 3 Sensitive Resource Management		Zone 4 Natural Resource Conservation		Zone 5 Industrial		Zone 6 Developed Recreation		Zone 7 Shoreline Access	
	Alternative		Alternative		Alternative		Alternative		Alternative		Alternative	
	A	B	A	B	A	B	A	B	A	B	A	B
Barren Land	68.7	85.0	45.6	22.0	315.4	302.4	12.7	18.2	93.7	112.3	44.1	40.3
Cultivated Crops	131.1	276.9	935.0	558.3	6,785.2	6,961.3	19.7	50.3	98.9	125.5	124.6	122.2
Deciduous Forest	2,570.2	2,909.7	5,571.0	4,958.7	38,040.8	36,387.7	791.2	1,626.2	3,594.2	4,387.9	2,859.6	3,182.3
Developed, High Intensity	71.2	78.8	0.1	0.1	10.6	0.9	30.4	31.6	31.3	34.1	3.8	2.5
Developed, Low Intensity	552.0	712.6	19.6	20.0	325.1	200.8	92.9	66.0	307.5	313.3	38.6	34.4
Developed, Medium Intensity	273.9	345.2	8.6	3.1	102.0	61.2	79.2	58.6	142.8	147.8	10.3	3.5
Developed, Open Space	722.3	1,001.9	194.5	166.9	1,419.3	1,135.1	130.8	120.6	713.7	767.6	261.0	257.2
Emergent Herbaceous Wetlands	50.4	82.4	170.2	133.4	2,384.3	2,367.6	40.3	59.7	46.8	58.4	65.5	56.1
Evergreen Forest Total	554.5	651.0	2,055.4	972.3	6,257.1	6,653.2	330.4	600.2	1,062.2	1,228.9	508.4	666.5
Hay/Pasture	776.9	842.9	1,047.6	512.9	2,286.1	2729.4	22.1	26.1	325.2	341.5	273.9	279.2
Herbaceous	116.4	154.6	311.7	153.2	877.9	993.0	14.0	18.1	114.9	121.6	91.7	87.2
Mixed Forest	541.1	609.0	1,133.5	765.4	2,018.8	2,029.4	55.7	175.9	262.9	451.1	146.9	128.3
Open Water	441.0	538.8	906.2	856.6	6,939.0	6,743.9	157.7	194.4	489.5	636.4	562.9	541.4
Shrub/Scrub	299.1	343.0	450.9	275.2	1,490.3	1,604.7	36.5	38.9	131.4	145.7	70.7	71.3
Woody Wetlands	2,035.7	2,194.8	2,713.7	3,891.7	27,755.4	25,520.5	224.1	256.2	639.2	825.7	1,312.3	1,991.8
Total	**9,204.6**	**10,826.6**	**15,563.5**	**13,289.9**	**97,007.4**	**93,690.9**	**2,037.6**	**3,341.0**	**8,054.0**	**9,697.9**	**6,374.2**	**7,464.3**

Source: Homer et al. 2015

3.5.3 Plant Communities

As the human population and associated commercial and residential development continues to increase, a related trend of increasing removal and fragmentation of natural vegetation is expected. Loss of native vegetation communities may lead to diminished biodiversity and alteration of habitat suitability. Common deciduous and evergreen forests and woodlands are extensive in the region surrounding the eight reservoirs. Under both alternatives, lands for natural resources conservation are identified and measures to minimize impacts would be implemented when projects are planned.

3.5.3.1 Alternative A – No Action Alternative

Under Alternative A, 96,991 acres of TVA land would be allocated to Zone 4 (Natural Resource Conservation). An additional 15,579 acres would be allocated to Zone 3 (Sensitive Resource Management). Therefore, approximately 81 percent of TVA land around the eight reservoirs would be allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation), which are the most protective of terrestrial habitat, impacts to plant communities would be minor.

Approximately 23,643 acres would be allocated to Zone 2 (Project Operations), Zone 6 (Developed Recreation), or Zone 7 (Shoreline Access) where there is an increased potential to effect to plant communities. Given the substantial amount of common vegetation types around the reservoirs, and the relatively low amount of land allocated to these zones (approximately 17 percent), selection of Alternative A would not have a major direct or indirect effect to common terrestrial plant communities. Project-specific surveys would be conducted prior to clearing vegetation to evaluate the presence of, and potential impacts to uncommon or rare plant communities. Therefore, activities on TVA land allocated to these land management zones are not expected to affect rare terrestrial plant communities.

Approximately 2,037 acres in the eight RLMPs would be allocated to Zone 5 (Industrial) land under Alternative A. This land use has the greatest potential for impacts to plant communities due to clearing required for construction and/or operation of industrial facilities. However, as land allocated to industrial use only comprises 1.5 percent of the TVA land around the eight reservoirs, impacts to plant communities would be minor.

3.5.3.2 Alternative B – Proposed Land Use Plan Alternative

Under Alternative B, 93,690 acres in the eight RLMPs would be allocated to Zone 4 (Natural Resource Conservation). An additional 13,290 acres would be allocated to Zone 3 (Sensitive Resource Management). This would result in approximately 5,590 fewer acres being allocated to the two land use zones which are the most protective of terrestrial habitat. Therefore, Alternative B would have a slightly higher potential for impacts to plant communities when compared to Alternative A. However, as described in Section 3.2, the proposed changes in land use allocations are relatively minor and generally correspond to a “re-alignment” to reflect current land uses and conditions on each parcel. Consequently, actual direct or indirect adverse impacts to plant communities are considered to be minor.

Approximately 28,000 acres in the eight RLMPs would be allocated to Zone 2 (Project Operations), Zone 6 (Developed Recreation), or Zone 7 (Shoreline Access), where there is an increased potential to effect plant communities. The number of acres allocated to these uses is approximately 3 percent higher than under Alternative A, resulting in Alternative B having a slightly higher potential for impacts to plant communities. Given the substantial amount of common vegetation types around the reservoirs, selection of Alternative B would

not result in major direct or indirect effects to common terrestrial plant communities. Project-specific surveys would be conducted prior to clearing vegetation to evaluate the presence of, and potential impacts to uncommon or rare plant communities. Therefore, activities around the eight reservoirs are not expected to affect rare terrestrial plant communities.

Approximately 3,341 acres would be allocated to Zone 5 (Industrial) under Alternative B, which is an increase of 960 acres, or less than 1 percent more, than under Alternative A. Although there is a greater potential for impacts to plant communities in land allocated to this zone, due to clearing required for construction and/or operation of industrial facilities, given the small amount of land allocated to Zone 5 (Industrial) on the eight RLMPs, this impact is considered minor.

Because the amount of land allocated to zones where development with a greater potential for ground disturbance would be allowed is slightly higher than Alternative A, the potential to promote the spread of invasive exotic plants is also higher than under Alternative A. However, requirements to use noninvasive species for planting or seeding would minimize the potential for spreading invasive species of plants.

3.5.4 Wildlife Communities

Deciduous and evergreen forests and woodlands are extensive in the region surrounding the eight reservoirs (see Table 3-10). Under both alternatives, lands for natural resources conservation are identified and measures to minimize impacts are implemented when projects are planned. Given the proximity and abundance of forested public lands adjacent to the reservoirs, the overall small percentage of land allocated to zones where ground disturbing activated could occur, impacts to wildlife are expected to be minor under both alternatives.

3.5.4.1 Alternative A – No Action Alternative

Proposed land allocations under this alternative would have a minor impact to wildlife communities for the reasons described above for plant communities. Project-specific surveys would be conducted prior to clearing potential wildlife habitats to evaluate the presence of, and potential impacts to uncommon or rare species. Therefore, activities around the eight reservoirs are not expected to affect wildlife communities.

3.5.4.2 Alternative B – Proposed Land Use Plan Alternative

Proposed land allocations under Alternative B would have a minor impact to wildlife communities for the reasons described above for plant communities. Approximately 5,590 fewer acres of land would be allocated to the two land use zones with the least likelihood for adverse impacts to wildlife. Therefore, Alternative B would have a slightly higher potential for impacts to wildlife communities when compared to Alternative A. However, much of the changes in allocation generally correspond to a “re-alignment” to reflect current land uses and conditions on each parcel and as over 77 percent of the land would be allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation) under this alternative, impacts would be minor.

Project-specific surveys would be conducted prior to clearing of potential habitats to evaluate the presence of, and potential impacts to uncommon or rare species. Therefore, the eight RLMPs are not expected to substantially affect wildlife communities.

3.6 Aquatic Ecology

3.6.1 Affected Environment

Aquatic life in the eight reservoirs are influenced by some of the same physical and chemical factors that affect water quality, such as adjacent land uses and reservoir operations, which are discussed in Section 3.8 (Water Quality). The Tennessee River and all major tributaries, including rivers and streams, have been affected by impoundments and point and nonpoint sources of pollution. As a result, the fish and other fauna adapted to habitat conditions of free-flowing medium and large rivers in and along the Tennessee River have extremely fragmented distributions, with many species known to have been extirpated from the reservoirs (Etnier and Starnes 1993, Parmalee and Bogan 1998).

Impoundments favor growth of aquatic species that are tolerant of lake-like conditions, and are less suitable for groups of aquatic species adapted to river conditions. Deep tributary reservoirs often undergo thermal stratification (layering) during summer, when the colder, less oxygenated water settles on the bottom. Therefore, bottom (benthic) habitat in reservoirs and in dam tailwaters can be very cold and have low dissolved oxygen (DO) content that impairs water quality and lowers aquatic community diversity. For example, none of the eight reservoirs included in the eight RLMPs support trout fisheries in the tailwaters.

Benthic organisms (e.g., aquatic insects, mussels, crayfish) are a vital part of the food chain of aquatic systems as they transform nutrients and organic materials into food for fish and other vertebrate predators. Benthic communities are extremely limited in the deep portions of tributary and some mainstream reservoirs, due to the lack of DO during summer stratification; and in the shallow areas of tributary reservoirs, due to winter drawdowns that leave these areas dry for extended periods. Low DO, excessive current, and cold water temperatures also limit benthic communities in tailwater areas immediately below the dam in reservoirs with a deepwater release.

Freshwater mussel species occur in stable gravel or cobble substrates which are kept silt-free by flowing water. Native mussels are extremely rare in tributary reservoirs due to the lack of DO during summer stratification. In mainstream reservoirs, the most species-rich mussel communities occur in the original river channel where bottom conditions and currents are much the same as they were before the dams were built.

The dynamics of fish communities shifted as a result of reservoir construction. Prior to impoundment, fish communities in the Tennessee River system were dominated by species which favored riverine conditions with associated periodic flood events. For the most part, reservoirs stabilized the habitat, reduced the flow of water in most sections, and trapped organic material, which increased nutrient availability. Fish species — such as largemouth bass, bluegill, and crappie — that prefer the more stable environments became much more numerous. Fish species — such as lake sturgeon, most sucker species, sauger, walleye, paddlefish, and other stream-spawning species (i.e., darters and many minnows) — that depend more on current and shoal areas were significantly reduced in numbers and diversity.

In reservoirs, aquatic habitat in the littoral (i.e., near shore) zone is greatly influenced by adjacent and upland land use and topography. In areas characterized by residential development, habitat includes man-made features such as riprap banks, seawalls, and docks. Undeveloped shoreline typically is wooded; therefore, trees and brush provide

woody cover in those areas. Shoreline topography varies from moderately deep with stretches of bluff along the main channels to typically shallow in embayments and coves. In reaches with a general lack of woody debris as underwater structure (e.g., submerged trees), rock can be an important component of underwater habitat. Rock habitat includes, but is not limited to, bedrock outcrops, a mixture of rubble and cobble, or even gravel deposits along main channel shorelines. Cove substrate is typically dominated by finer particles (e.g., sand, silt, and clay) with lesser amounts of gravel and cobble particles. Structure provides protection from predators, shade to cool the water temperature in the shallow littoral zone, spawning habitat, and places for food organisms to live and grow. Algae and other organisms (including bacteria, zooplankton, and aquatic insects), which are important fish foods, use physical and biological structure as growth substrates.

Commercial fish species that require suitable habitat in shoreline areas include catfish — which spawn in cavities such as those found in hollow logs or created by groupings of large rocks — and buffalo fish — which broadcast their adhesive eggs over the river bottom or on vegetation. Many nonsport fish species also rely heavily on this productive zone of the reservoir. Minnows such as bluntnose and bullhead; shiners such as golden, spotfin, steelcolor, and emerald; brook silversides; and logperch all require relatively unspoiled shoreline habitat. Up until 2015, TVA conducted a Spring Sport Fish Survey that assessed the number and health of fish in each reservoir. Overall, the Chickamauga Reservoir had the most spotted bass and black crappie, while Fort Loudoun had the most white crappie. Other aquatic species in the reservoirs include popular sporting fish including largemouth bass, smallmouth bass, catfish, walleye, and bluegill.

There are several exotic, non-native, and/or pest aquatic species that are known to occur within Tennessee, Alabama, and/or Kentucky. Although there are many exotic or introduced aquatic species within the region, a few species are considered more detrimental due to their ability to have broad impacts to overall aquatic systems as well as direct impacts to humans. These include Asian carp, especially bighead carp (*Hypophthalmichthys nobilis*), silver carp (*Hypophthalmichthys molitrix*) (EDDMapS 2016), and zebra mussel (*Dreissena polymorpha*). Asian carp cause serious damage to the native fish populations in the lakes and rivers that they infest because they out-compete other fish for food and space. Carp are also thought to lower water quality, which can kill off sensitive organisms like native freshwater mussels. Asian carp have been known to dominate entire streams, effectively pushing out the native species. Asian carp are also known to pose danger to humans due to their habit of jumping out of the water and striking boaters and water skiers and damaging boats and equipment. Zebra mussels are notorious for their biofouling capabilities by colonizing water supply pipes of hydroelectric and nuclear power plants, public water supply plants, and industrial facilities. They colonize pipes constricting flow, therefore reducing the intake in heat exchangers, condensers, firefighting equipment, and air conditioning and cooling systems. Navigational and recreational boating can be affected by increased drag due to attached mussels. Small mussels can get into engine cooling systems causing overheating and damage. Navigational buoys have been sunk under the weight of attached zebra mussels. Zebra mussels can have profound effects on the ecosystems they invade. They primarily consume phytoplankton, but other suspended material is filtered from the water column including bacteria, protozoans, zebra mussel veligers, other microzooplankton and silt (Benson et al. 2016).

Ecological conditions in streams and reservoirs are monitored under a number of TVA programs. Aquatic ecological conditions in the larger reservoirs have been monitored using the Reservoir Vital Signs Monitoring Program (RVSMP), which focuses on (1) physical and

chemical characteristics of waters; (2) physical and chemical characteristics of sediments; (3) benthic macroinvertebrate community sampling; and (4) fish assemblage sampling. The RVSMP includes evaluation of the resident fish populations in reservoirs using an analysis tool known as the Reservoir Fish Assemblage Index (RFAI) (McDonough and Hickman 1999). Also considered in the rating is the percentage of the sample represented by omnivores and insectivores, overall number or fish collected, and the occurrence of fish with anomalies such as diseases, lesions, parasites, and deformities. The RVSMP also includes evaluation of benthic macroinvertebrate communities based upon seven parameters that indicate species diversity, abundance of selected species that are indicative of good (or poor) water quality, total abundance of selected species, and proportion of samples with no organisms present. Great Falls Reservoir, located outside of the Tennessee River Watershed, is not include in the various TVA monitoring programs.

Biennial RFAI scores recorded between 2010 and 2012 indicate fish assemblage scores are typically fair to good in the reservoirs where monitoring has been conducted (Table 3-11). Benthic scores are poor on Normandy Reservoir, fair to poor on Fort Loudoun, and poor to good on Kentucky, Wilson, and Wheeler reservoirs. Only the Chickamauga and Nickajack reservoirs had scores other than poor and included fair to good. A good rating for bottom life indicates that there is a healthy population of worms, insects, and snails on the reservoir floor. Monitoring locations within reservoirs typically include tailwater, mid-reservoir, and embayment sites, which are strong influences on the fish and other fauna due to variations in habitat conditions. Detailed results of RFAI and benthic macroinvertebrate sampling are provided in the individual RLMPs (Volumes II through IX).

Table 3-11. Reservoir Health Ratings

Reservoir (Year)	Ecological Health Indicator Score	
	Fish Community	Bottom Life
Chickamauga (2011)	Fair-Good	Fair-Good
Fort Loudoun (2011)	Fair-Good	Poor-Fair
Great Falls	N/A	N/A
Kentucky (2011)	Fair-Good	Poor-Good
Nickajack (2012)	Fair-Good	Good
Normandy (2010)	Good	Poor
Wheeler (2011)	Fair-Good	Poor-Good
Wilson (2012)	Fair-Good	Poor-Good

Source: TVA 2016b

3.6.2 Environmental Consequences

The major source of potential adverse impacts to common aquatic species in the reservoirs would be from land uses that would involve clearing of shoreline vegetation, and result erosion and increased runoff. Shoreline riparian vegetation provides several benefits to aquatic life. Shoreline vegetation can provide shade to help control water temperature, especially in cove areas where the water is usually shallow with little flow. Terrestrial vegetation also provides habitat for insects that are fed upon by carnivorous and insectivorous aquatic species. Tree root wads along the shoreline provide refuge from predation. Submerged trees that have fallen into the water also provide structure in the reservoir. Riparian vegetation also serves to stabilize shoreline soil, thereby reducing the

potential for erosion. Sedimentation associated with erosion can clog voids between rocks in the substrate of streams and reservoirs. These voids are important for fish spawning and habitat for aquatic insects. Clean rocky substrates are also the home of sessile freshwater mussels that can be smothered by sedimentation. Potential impacts to aquatic ecology likely would be greater from development activities on parcels allocated to Project Operations (Zone 2), Industrial (Zone 5) or Developed Recreation (Zone 6), where more development and intensive land use could occur. In addition, uses allowed on parcels allocated to Zone 7 (Shoreline Access) could potentially impact aquatic ecology as these parcels are locate adjacent to the reservoir. However, given the nature of uses allowed in this land management zone, impacts would be minor and localized

3.6.2.1 Alternative A – No Action Alternative

Approximately 97,000 acres on these reservoirs would be managed for Zone 4 (Natural Resource Conservation) and an additional 15,580 acres would be allocated to Zone 3 (Sensitive Resource Management). These two zones comprise approximately 81 percent of the reservoir lands and would be most protective of aquatic ecology.

Under Alternative A, approximately 19,307 acres are allocated to Zones 2, 5, and 6 (Project Operations, Industrial and Developed Recreation), which allow land uses with a higher potential for activities that may affect aquatic ecology (see Table 2-1). Future land use requests can either be approved or denied based on a review of potential environmental impacts, compliance with TVA's Land Policy, and other administrative considerations. Due to the required project-specific environmental review and adherence to regulations application of TVA Section 26a General and Standard Conditions/BMPs (TVA 2005a), impacts to aquatic ecology as a result of future developments would be minor.

3.6.2.2 Alternative B – Action Alternative

Land uses around Wilson and Great Falls reservoirs would not change under this alternative. Therefore, the condition of aquatic communities (fish and benthic organisms) in Wilson Reservoir would most likely remain in poor to good condition under any of the alternatives (there is no monitoring data for Great Falls Reservoir).

Alternative B includes a small reduction in the portion of TVA-managed land allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation) and an increase in land allocated to Zones 2, 6, and 7 (Project Operations, Developed Recreation, and Shoreline Access, respectively) (see Table 2-7). Although many of the proposed changes in allocation generally correspond to a "re-alignment" to reflect current land uses and conditions on each parcel, new development would be subject to site-specific environmental review, as well as applicable state and TVA guidelines for minimizing impacts to aquatic habitat. In some instances, construction of docks and associated pilings and structures such as rock aggregation can have potential short-term negative impacts during construction, but also enhances shoreline habitat by providing shade and cover for some fish and aquatic invertebrates. Therefore, while potential impacts to aquatic resources under Alternative B would be slightly greater than those under Alternative A, they would still be minor and presumably insignificant in the long-term.

3.7 Threatened and Endangered Species

3.7.1 Affected Environment

The ESA (1973, as amended, 16 USC §§ 1531-1543) was passed to conserve the ecosystems upon which endangered and threatened species depend and to conserve and recover those species. An endangered species is defined by the ESA as any species in danger of extinction throughout all or a significant portion of its range. A threatened species is likely to become endangered within the foreseeable future throughout all or a significant part of its range. Critical habitats, essential to the conservation of listed species, also can be designated under the ESA. The ESA establishes programs to conserve and recover endangered and threatened species and makes their conservation a mandate for federal agencies. Under Section 7 of the ESA, federal agencies are required to consider the potential effects of their proposed action on endangered and threatened species and critical habitats. If the proposed action has the potential to affect these resources, the Federal agency is required to consult with the USFWS.

The TVA Natural Heritage database was used to locate records of threatened and endangered species within the parcels included in the eight RLMPs and within the general vicinity of the reservoirs (Table 3-12) (TVA 2016c). Accordingly, plants are assessed within a 5-mile radius, terrestrial species within a 3-mile radius, and aquatic species within a 10-mile radius. More information on specific records and habitat requirements of these species are included in the individual RLMPs (Volumes II through IX).

Table 3-12. Records of Threatened and Endangered Species in the Vicinity of TVA Reservoirs

Reservoir	Plants		Terrestrial Wildlife		Aquatic Species	
	5-mile Radius	Parcels	3-mile Radius	Parcels	10-mile Radius	Parcels
Chickamauga	29	5	21	6	42	0 (12 in reservoir)
Fort Loudoun	17	0	14	1	41	0 (12 in reservoir)
Great Falls	17	2	31	1	13	0 (5 in reservoir)
Kentucky	84	21	36	13	78	3 (40 in reservoir)
Nickajack	53	10	20	7	54	2 (9 in reservoir)
Normandy	50	1	8	3	23	5 (6 in reservoir)
Wheeler	52	9	28	6	95	12 (62 in reservoir)
Wilson	7	1	9	1	101	0 (13 in reservoir)

3.7.2 Environmental Consequences

Impacts on common terrestrial plant and animal species are addressed in Section 3.5 and impacts on common aquatic species are addressed in Section 3.6. Impacts to threatened and endangered species are determined based on known existing populations and historical records within TVA parcels.

Analysis of the effects to threatened and endangered species is based upon the potential for proposed activities to result in development that would clear vegetation or cause ground disturbance, which would be the primary sources of direct impacts to these species. Indirect effects to threatened and endangered species include habitat fragmentation and increased recreational use that may spread of invasive, nonnative species that compete with threatened and endangered species.

Land allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation) would be the most protective of potential habitat as these areas have little potential for site development. Land allocated to Zone 5 (Industrial) has the greatest potential to involve ground disturbance that may affect threatened and endangered species on land and in adjacent waterbodies. The potential impacts to threatened and endangered species from land allocated to Zone 2 (Project Operations), Zone 6 (Developed Recreation), and Zone 7 (Shoreline Access) are dependent upon the existing condition of the land as well as the proposed future use.

Future actions on lands allocated to these zones may involve substantive development (e.g., new roads, campgrounds, marinas, etc.) and, unlike relatively common plant and animal species, threatened and endangered species do not generally adapt well to development of this nature. Some land uses allowed in land allocated to these zones may not require extensive land disturbance (such as the development of pathways or implementation of shoreline stabilization efforts) which would cause minor changes in overall existing conditions. Moreover, ESA Section 7 requires federal agencies to ensure that its activities do not jeopardize the continued existence of federally listed species or result in destruction or adverse modification of critical habitat. ESA Section 7(a)(2) requires minimization of the level of ‘incidental take’ through the use of reasonable and prudent measures. Table 3-13 provides the number of known records of threatened and endangered species within each land management zone.

Under both alternatives, any future development projects will require site-specific environmental reviews to evaluate the presence of and specific impacts to threatened and endangered species. Therefore direct impacts to these species are not anticipated.

Listed aquatic species are less susceptible to negative impacts by land-based development than terrestrial species, but land-use practices and riparian development can in fact have measurable effects on aquatic habitat adjacent and downstream. Typically, negligible and temporary indirect impacts due to sediment and stormwater runoff from construction sites that enter the reservoirs and their watersheds are the most common type of impact to aquatic species and their habitat. All projects conducted on TVA lands will comply with required environmental permitting and will include best management practices to ensure that runoff from construction sites is controlled in an effort to protect adjacent aquatic resources.

Table 3-13. Known Records of Listed Species by Land Use Allocation Zone

Reservoir	Number of Known Records of Threatened and Endangered Species					
	Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation)		Zones 2, 6, and 7 (Project Operations, Developed Recreation, and Shoreline Access)		Zone 5 (Industrial)	
Alternative:	**A**	**B**	**A**	**B**	**A**	**B**
Chickamauga	47	50	6	3	0	0
Fort Loudon	0	0	2	2	0	0
Great Falls	0	0	2	2	0	0
Kentucky	57	57	13	14	1	0
Nickajack	23	20	1	4	0	0
Normandy	6	6	3	3	0	0
Wheeler	37	37	4	4	0	0
Wilson	0	0	4	4	0	0
Totals	**170**	**170**	**35**	**36**	**1**	**0**

Source: TVA 2016c

3.7.2.1 Alternative A – No Action Alternative

Under this alternative, the majority (83 percent) of TVA records of threatened and endangered species occur on or adjacent to (i.e., aquatic species) parcels zoned for either Zone 3 (Sensitive Resource Management) or Zone 4 (Natural Resource Conservation). Because these lands are managed to be protective of potential habitat and have little potential for site development, direct impacts to threatened and endangered species would likely only occur as a result of dispersed recreation, and forest management activities; however project-specific surveys would be conducted prior to any site clearing activities and because TVA discourages dispersed recreation in areas that support threatened and endangered species, these types of impacts would ordinarily be minor.

There are 35 known records of threatened and endangered species occurring on parcels allocated to Zones 2, 6, or 7 (Project Operations, Developed Recreation and Shoreline Access, respectively). There is one record of a listed species on a parcel allocated to Zone 5 (Industrial). Potential impacts to threatened and endangered species on or adjacent to (i.e., aquatic species) land allocated to these zones would be minor for the reasons listed above.

3.7.2.2 Alternative B – Proposed Land Use Plan Alternative

Under this alternative, there would be a slightly smaller percentage of land allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation) which are protective of threatened and endangered species and their habitats.

There are no known records of threatened and endangered species on parcels proposed to be allocated to Zone 5 (Industrial). There are 36 records of threatened and endangered species in parcels proposed to be zoned as Zone 2 (Project Operations), Zone 6 (Developed Recreation), or Zone 7 (Shoreline Access). The following are some of the

specific instances where listed species are known to occur on parcels or adjacent to (i.e., aquatic species) that would be allocated to Zones 2, 6 or 7:

- A total of 11 parcels on Chickamauga Reservoir are known to contain populations of large-flowered skullcap. One of those parcels is proposed as Zone 2 (Project Operations) and could be impacted by any proposed future development if populations are located within proposed site disturbance areas.
- In addition to the large-flowered skullcap, a total of 28 other state-listed plants have been documented within 5 miles of Chickamauga Reservoir. Four of those plant species, including Alabama snow-wreath, American ginseng, northern bush-honeysuckle, and white prairie-clover, have been recorded on TVA parcels associated with Chickamauga Reservoir.
- A known gray bat and northern long-eared bat hibernacula sits above a parcel zoned for Zone 7 (Shoreline Access) on Chickamauga Reservoir. Depending on how shoreline access is approached in this area, these bats may be impacted by development. Additional studies may be required should any type of development occur in this area.
- Two species have been recorded on Great Falls Reservoir at Rock Island State Park on a parcel proposed to be allocated as Zone 6 (Developed Recreation) under the draft RLMP. Disturbance associated with human activities could result in some minor impacts to these species.
- Populations of bunchflower and swamp wedgescale that occur on parcels allocated to Zone 7 (Shoreline Access) on Kentucky Reservoir may be impacted by future development. There is one record of Lamance iris on a proposed Zone 2 (Project Operations) parcel that may be impacted by future development if the population persists at this location.
- There are records of the helmet rock snail, tan riffleshell mussel, and turgid blossom pearlymussel on a Normandy Reservoir parcel proposed to be allocated to Zone 2 (Project Operations). The records of these three species are historic and they may be extirpated from the region. However, if they still occur on this parcel, they may be impacted by future development.
- There are records of the little brown bat, gray bat, northern long-eared bat, bald eagle, and common barn owl on parcels on Wheeler Reservoir proposed to be allocated to Zone 2 (Project Operations). The bald eagle and common barn owl nests may be active. The records of the bats are from mist nest captures and/or ANABAT systems.
- There is an active gray bat summer roost at Joe Wheeler State Park on Wheeler Reservoir proposed to be allocated to Zone 6 (Developed Recreation).
- In addition to the state-listed Dutchmen's breeches, there are three Alabama champion trees on a parcel on Wilson Reservoir allocated to Zone 2 (Project Operations), the American yellowwood, paper mulberry, and September elm. Additional development could impact these resources. However, it is likely that the champion trees could be avoided. In addition, Dutchman's breeches have not been recorded in this locality since 1978 and may no longer be present.
- A gray bat was caught on a Wilson Reservoir on a parcel allocated to Zone 2 (Project Operations) during previous studies. Two large gray bat maternity roosts occur at least 5 miles from this parcel. However, because there are no known

occupied gray bat hibernacula on that parcel, it is likely that gray bat uses the parcel for foraging habitat only. It is unlikely that future development would adversely impact gray bats with proper use of best management practices around water resources.

- There is an active bald eagle nest within 660 feet of a Wilson Reservoir parcel proposed to be allocated as Zone 2.

Project-specific surveys would be conducted prior to any site clearing activities on these parcels. Consequently, impacts from projects to these species would be minor, because if any listed species are detected in these areas, additional steps would be taken during the planning process to avoid, minimize, and/or mitigate the project impacts.

Because the impacts to threatened and endangered species is relatively similar between alternatives, there is likely very little to no measurable difference in the extent of negative impacts to threatened and endangered species between Alternatives A and B. There would be a slightly smaller percentage of land allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation) as compared to Alternative A. Additionally, any future development of lands potentially supporting use by sensitive species will be coordinated with both state and federal agencies, as appropriate. Therefore relatively few additional impacts to threatened and endangered species by changes in land allocation are anticipated.

3.8 Water Quality

3.8.1 Affected Environment

Water quality of within the eight reservoirs is influenced by many factors, including the size, geology, and land use conditions in upstream drainage areas, point and nonpoint discharges of pollutants adjacent land use activities and operation of the reservoirs. Both natural and anthropogenic factors, including reservoir operations, have important influences on water quality. Adjacent lands, while only a small fraction of the contributing watershed to the reservoirs, can be a significant factor affecting water quality, especially to local reservoir segments such as embayments. TVA-managed parcels in the eight reservoirs are located in close proximity to the reservoirs, generally along the shorelines or a short distance from the shoreline. Thus, shorelines and contributing surface drainages are also characterized by short lengths of small streams or wet weather conveyances that discharge to the reservoir. Up-slope lands may drain onto these lands via small streams, wet weather conveyances, or diffuse flow. The eight RLMPs encompass a relatively small fraction of the total watershed for each of the reservoirs. As such, potential runoff from adjacent lands is a contributor to water quality, but in proportion to the lands within the total watershed the runoff contribution is very small.

Most of reservoirs have multiple purposes that may include navigation, flood control, hydroelectric power, water supply, and/or recreation. Efforts to optimize the benefits of each reservoir’s purpose while minimizing undesirable effects on other services and conditions, including water quality, is a complex matter. Within the anticipated range of hydrologic conditions, operations determine the water levels in the reservoirs and the flows released to downstream river reaches or reservoirs. Seasonal variations in water levels and water demand play an important role in the operations as well. For example, flood control requires having temporary storage available during the time of the year when floods usually occur, whereas the storage reserved for flood control may be reduced during periods of the year when large floods are less likely to occur. The dams create deep impoundments with

slower-moving water and vertical variations in temperature, dissolved oxygen, and other water quality characteristics. Flow releases from varying depths may have varying water quality. Finally, sediments transported into the reservoirs from tributaries and adjacent land are captured in the reservoirs as a result of the impounding effect of the dams and reduced flow velocities.

An extensive effort to update and optimize system-wide reservoir operations was completed in 2004 under the ROS (TVA 2004). That effort involved a comprehensive consideration of water quality conditions and the effects of reservoir operations on water quality. Some important characteristics affected by reservoir operations include dissolved oxygen conditions associated with impoundment and releases through hydroelectric facilities, and shoreline erosion and other littoral conditions within the reservoir fluctuation zones. The hydraulic residence time, or the average time that water takes to pass through a reservoir, is one of the primary mechanisms influencing water quality. Some of the basic physical characteristics of the eight reservoirs, including residence time, are summarized in Table 3-14.

TVA has improved tailwater water quality below many of its hydroelectric facilities. This has been accomplished by the establishment of the Reservoir Releases Improvement Program, which was begun officially in 1991 when the TVA Board approved a five-year plan to improve water releases from 16 dams by maintaining minimum flows and reaeration of dam discharges. Implementing minimum flows was accomplished via turbine pulses, and dissolved oxygen levels increased in a variety of ways (e.g., turbine venting, oxygen injection, and weir dams) (Higgins and Brock 1999). These techniques helped to mimic more natural riverine conditions in TVA tailwaters. The Reservoir Releases Improvement Program included daily scheduling at the Chickamauga and Kentucky reservoirs to meet minimum flows. Sufficient water, reservoir storage, and operational flexibility exist at this reservoir to maintain flows by appropriately scheduling normal releases. The Reservoir Releases Improvement Program included oxygen injection at the Fort Loudoun Reservoir to help meet the dissolved oxygen target concentration. The basic system consists of an oxygen supply facility and diffuser system for transferring the oxygen to the turbine intake water. As a result, the dissolved oxygen increased approximately 1 milligram per liter (Higgins and Brock 1999).

While short-term flow rates through the reservoirs are controlled by operations, long-term average flows are largely controlled by watershed runoff resulting from precipitation. The long-term average annual flow through the reservoirs varies with drainage area. For the Tennessee River reservoirs, the average annual runoff as determined from 10 long-term USGS streamflow stations (USGS 2016) distributed along the river increases from approximately 1.45 cubic feet per second per square mile (cfs/sq mi) (19.7 inches/year) in upstream reaches with a drainage area of around 10,000 sq mi to approximately 1.72 cfs/sq mi (23.3 inches per year) at a drainage area of 25,000 sq miles. The average annual runoff drops slightly at the downstream end of the Tennessee River with a value of 1.65 cfs/sq mi (22.4 inches per year) downstream of Kentucky Lake.

Great Falls Reservoir is on Caney Fork, a tributary to Cumberland River, and outside of the Tennessee River basin. The drainage area at the Great Falls Dam is approximately 1,680 sq mi. The runoff pattern is similar to the Tennessee River, but the seasonal variation is more pronounced. The runoff as measured at the USGS Station 03422500 Caney Fork near Rock Island, Tennessee, which is downstream of the Great Falls Dam, indicates runoff averaging 1.91 cfs/sq mi of watershed, with monthly long-term averages ranging from

2.19 times the annual average in March and 0.24 times of the annual average for the month of September. Great Falls Reservoir has substantial storage that varies seasonally and the monthly flows are somewhat affected by those historic reservoir operations. However, streamflow observed at a USGS station on Caney Fork upstream of Great Falls indicates a similar pattern as the Rock Island station.

Streamflows have a distinct seasonal pattern throughout the Tennessee River. Average monthly runoff is highest during the months of January through March and lowest during the months of June through October. Average runoff during high flow months is approximately 30 percent to 60 percent above the annual mean runoff and low runoff months average approximately 60 percent to 90 percent of average annual runoff. This pattern has a significant influence on water quality as the residence time is significantly increased during low flow periods and mixing of flow in the reservoirs is reduced, resulting in greater stratification.

Table 3-14. Physical and Operational Characteristics of Reservoirs

Reservoir	River	Type[3]	Minimum Flow[4] (cfs)	Drainage Area (sq mi)	Mean Annual Flow (cfs)	Full Pool		Mean Depth[1] (ft)	Residence Time[1] (days)
						Surface Area (ac)	Full Pool Storage Volume (acre-feet)		
Chickamauga	Tennessee	Storage	3,000 – 13,000 (water supply, water quality)	20,794	33,978	35,404	628,395	17.7	8
Fort Loudoun	Tennessee	Storage	Not available	9,549	16,353	14,603	363,253	24.9	10
Great Falls	Caney Fork	Storage	Not available	1,680	3,130	1,830	17,913[2]	9.8	3
Kentucky	Tennessee	Storage	5,000 – 20,000 (water supply, water quality, navigation)	40,205	61,951	160,320	2,839,533	17.7	19
Nickajack	Tennessee	Run-of-River	Not available	21,871	35,249	10,372	240,817	23.3	3
Normandy	Duck	Storage	40 / 155 (water supply, water quality)	197	353	3,230	116,760	36.1	141
Wheeler	Tennessee	Storage	7,000 – 11,000 (nuclear cooling water)	29,594	50,578	67,078	1,050,027	15.7	9
Wilson	Tennessee	Run-of-River	8,000 (Navigation)	30,752	52,591	15,502	634,071	41.0	6

[1] Residence time calculated from average storage, not full pool storage

[2] Great Falls storage is average storage for past 20 years based on daily reservoir storage data),

[3] Reservoirs are categorized as either storage or run-of-river; storage reservoirs provide a significant storage volume for flow regulation and run-of-river reservoirs generally pass flows through the reservoir with minimal effect on the flow. Storage reservoirs provide flood control, hydroelectric power, and water supply.

[4] TVA ROS Table A-03. These are minimum guideline flows and not the lowest flow that may be discharged

Source: TVA 2004.

3.8.1.1 Water Quality Monitoring

Water quality conditions within TVA reservoirs is evaluated by several programs designed to monitor the chemical and biological conditions of the aquatic environment. These programs include state monitoring programs designed to evaluate impairment, and TVA's reservoir health monitoring program. The following sections provide an overview of these monitoring systems.

3.8.1.1.1 State Impaired Waters

Under the CWA, each state is required to assess surface waters in the state to determine the conditions relative to the intended use of the water body. Waters not meeting intended uses are identified as impaired and included on a listing known as the 303(d) list submitted to the U.S. Environmental Protection Agency (USEPA) every two years. The impaired water body segments from the latest versions of publically available 303(d) lists were reviewed. A total maximum daily load (TMDL) study establishing limits on loading of pollutants identified as contributing to the impairment is completed under the CWA to mitigate conditions.

Tennessee Department of Conservation

TDEC has identified segments of the Chickamauga, Fort Loudoun, and Nickajack reservoirs as being impaired (Table 3-15). Chickamauga Reservoir has one segment listed, the Hiawassee River embayment with an area of 3,130 acres with a Low TMDL priority. The cause of the impairment is identified as mercury contaminated sediment with the source identified as atmospheric deposition. Fort Loudoun Reservoir is a listed impaired water with an impaired area of 14,066 acres (water body ID TN06010201020 – 1000) due to PCB contaminated sediment. A smaller portion of that area also is identified as being impaired by mercury contaminated sediments. A 10,370-acre area of Nickajack Reservoir at Chattanooga is identified as impaired by PCB and dioxin contaminated sediments with a low TMDL priority.

Alabama Department of Environmental Management

Nine different water body segments within Wheeler Lake encompassing the entire reservoir are identified by ADEM as being impaired by nutrients from agricultural sources (Table 3-16). The Limestone Creek embayment area of 1,543 acres (segment ID AL06030002-0906-600) is identified as being impaired by mercury due to atmospheric deposition.

At Wilson Lake, the McKiernan Creek embayment (water body ID AL06030005-0801-201) is identified as being impaired by nutrients from agricultural sources. Additionally, the entire Wilson Lake from Wheeler Dam to Wilson Dam, with area of 15,311 acres, has been included ADEM's 2016 final draft 303(d) list.

Kentucky Energy and Environment Cabinet

While the downstream end of Kentucky Lake is located in Kentucky, the majority of the reservoir is located in Tennessee. The Kentucky Energy and Environment Cabinet, Division of Water has not included any segments of Tennessee River/Kentucky Lake in the 2012 303(d) list as impaired water bodies.

Table 3-15. Tennessee Department of Environment and Conservation 303(d) Listed Water Bodies Associated with the Chickamauga, Fort Loudoun, Great Falls, Kentucky, Nickajack, and Normandy Reservoirs

Waterbody ID	Impacted Waterbody	County	CAUSE / TMDL Priority [L=low]	Pollutant Source	Comments	Miles/Acres Impaired
TN06020002001 - 2000	Hiwassee River embayment of Chickamauga reservoir	Meigs, McMinn, Bradley	Mercury/Low	Atmospheric Deposition Industrial Point Source	Fishing advisory due to mercury in largemouth bass. Category 5. Assistance requested for atmospheric deposition TMDLs.	3,130 acres
TN06020002008 – 1000	Hiwassee River embayment of Chickamauga reservoir	Bradley, McMinn	Escherichia coli/ Not applicable Mercury/Low	Undetermined Source Industrial Point Source Atmospheric Deposition	Fishing advisory due to mercury. Category 5. EPA has approved a pathogen TMDL and should assist on the mercury TMDL.	1,050 acres
TN06010201020 - 1000	Fort Loudoun Reservoir	Knox, Loudon	PCBs/Not applicable	Contaminated Sediment	Fishing advisory due to PCBs. Category 4a. EPA approved a PCB TMDL for the known pollutant	14,066 acres
N06010201020 - 2000	Fort Loudoun Reservoir	Knox	Mercury/Low PCBs/Not applicable	Atmospheric Deposition Contaminated Sediment	Fishing advisory due to mercury and PCBs. Category 5. EPA approved a PCB TMDL for some of the known pollutants.	534 acres
TN05130108025 – 1000	Caney Fork River	DeKalb, White	Habitat loss due to stream flow alteration/Not applicable	Upstream Impoundment	Category 4c. Impacts not caused by a pollutant. Section of Caney Fork de-watered by Great Falls Reservoir.	1.4 miles
TN06020001001 – 1000	Nickajack Reservoir	Marion, Hamilton	PCBs /Low Dioxins/Low	Contaminated Sediment	Precautionary fishing advisory for catfish. The federally listed fish, the snail darter (*Percina tansi*), has been documented. Category 5.	10,370 acres
TN06040005038 - 0100	West Sandy embayment - Kentucky Reservoir	Henry	Nutrients /Low Low dissolved oxygen/Low Loss of biological integrity due to siltation / Low	Septic Tanks; Upstream Impoundment	Stream is Category 5. (One or more uses impaired.)	3.7 acres

Source: TDEC 2014a

Table 3-16. Alabama DEM 303(d) Listed Water Bodies Associated with the Wheeler and Wilson Reservoirs

Assessment Unit ID	Waterbody Name	Type	County	Uses	Causes	Sources	Size (acres)	Downstream / Upstream Locations	Year Listed	Draft TMDL Date
AL06030002-0904-100	Tennessee River (Wheeler)	Lake	Madison, Marshall, Morgan	Public Water Supply, Fish and Wildlife	Nutrients	Agriculture	3,531	Indian Creek /Flint River	2014	2020
AL06030002-0906-102	Tennessee River (Wheeler)	Lake	Madison, Marshall	Public Water Supply, Swimming, Fish and Wildlife	Nutrients	Agriculture	334	Cotaco Creek/ Indian Creek	2014	2020
AL06030002-1102-102	Tennessee River (Wheeler)	Lake	Limestone, Morgan	Public Water Supply, Swimming, Fish and Wildlife	Nutrients	Agriculture	2,587	US Highway 31/ Flint Creek	2014	2020
AL06030002-1102-103	Tennessee River (Wheeler)	Lake	Limestone, Madison, Morgan	Swimming, Fish and Wildlife	Nutrients	Agriculture	7,385	Flint Creek/ Cotaco Creek	2014	2020
AL06030002-1107-102	Tennessee River (Wheeler)	Lake	Lawrence, Limestone, Morgan	Swimming, Fish and Wildlife	Nutrients	Agriculture	20,633	5 miles upstream of Elk River /US Highway 31	2014	2020
AL06030002-1205-100	Tennessee River (Wheeler)	Lake	Lawrence, Limestone, Morgan	Public Water Supply, Swimming, Fish and Wildlife	Nutrients	Agriculture	15,168	Wheeler dam/ 5 miles upstream of Elk River	2014	2020
AL06030002-1107-102	Tennessee River (Wheeler)	Lake	Lawrence, Limestone, Morgan	Swimming, Fish and Wildlife	PFOS	Industrial	20,633	5 miles upstream of Elk River /US Highway 31	2014	2020
AL06030002-0906-600	Limestone Creek (Wheeler)	Lake	Limestone	Swimming, Fish and Wildlife	Metals (Mercury)	Atmospheric deposition	1,543	Embayed portion of Limestone Creek	2012	2020

Assessment Unit ID	Waterbody Name	Type	County	Uses	Causes	Sources	Size (acres)	Downstream / Upstream Locations	Year Listed	Draft TMDL Date
AL06030004-0405-101	Elk River (Wheeler)	Lake	Lauderdale, Limestone	Swimming, Fish and Wildlife	pH	Non-irrigated crop production Pasture grazing	1,569	Tennessee River /Anderson Creek	1996	2018
AL06030004-0405-101	Elk River (Wheeler)	Lake	Lauderdale, Limestone	Swimming, Fish and Wildlife	Nutrients	Non-irrigated crop production Pasture grazing	1,569	Tennessee River /Anderson Creek	2004	2018
AL06030005-0801-201	McKiernan Creek (Wilson)	Lake	Colbert	Public Water Supply, Swimming, Fish and Wildlife	Nutrients; Organic enrichment (CBOD, NBOD); Siltation (habitat alteration)	Agriculture	212	Embayed portion of McKiernan Creek	1998	2015
AL06030005-0801-100	Tennessee River (Wilson)	Lake	Colbert Lauderdale Lawrence	Public Water Supply, Swimming Fish and Wildlife	Nutrients	Agriculture	15,311	Wilson Dam Wheeler Dam	2016	2016
AL06030005-0105-111	Big Nance Creek (Wilson)	River	Lawrence	Fish and Wildlife	Metals (Mercury)	Atmospheric deposition	45	Tennessee River / end of embayment	2016	2016

Source: Roy 2014, ADEM 2016

3.8.1.1.2 Reservoir Ecological Health

In addition to the information from the state water quality assessments, reservoir water quality information is also available from TVA's Reservoir Health Ratings monitoring program. Since 1990, TVA has implemented the Reservoir Ecological Health Monitoring Program to determine reservoir health as compared to other reservoirs in the TVA system, to provide data for comparing future water quality conditions, and as a screening program to target needs for more detailed studies. As a part of this program, TVA developed a reservoir ecological health scoring system to aid in data evaluation and communication of monitoring results to the public. Under this program, TVA collects samples at up to four locations in each reservoir on a two year cycle. Each reservoir receives a score based on five factors: dissolved oxygen, chlorophyll, and sediments characteristics, each utilizing physical or chemical measurements, as well as fish and bottom life. For a discussion of the biological ratings, see Section 3.6 Aquatic Ecology. The Great Falls Reservoir is not part of TVA's Reservoir Ecological Health Monitoring Program.

DO is necessary in respiration of most aquatic organisms. Ideally, a reservoir has enough DO throughout the water column available to fish, insects, and zooplankton (microscopic aquatic animals) for respiration. Concentrations of DO in a reservoir both control and are controlled by many physical, chemical, and biological processes (e.g., photosynthesis, respiration, oxidation-reduction reactions, bacterial decomposition, temperature) that determine the assimilative capacity of a reservoir. Assimilative capacity is a water body's ability to receive wastewaters or other materials requiring oxygen for decomposition without deleterious effects and without damage to aquatic life. If concentrations are low enough and/or low levels are sustained long enough, it can adversely affect the health and diversity of aquatic organisms. DO levels are expressed in terms of milligrams/liter.

DO is a common concern in reservoirs, particularly when hydroelectric facilities discharge water through the turbines, limiting re-oxygenation that might otherwise occur at a spillway discharge. The 2003 Reservoir Operations Study identified DO concerns and approaches to mitigating problems through operations changes. Overall the reservoirs rated from poor to good for DO. The most recent DO scores for each of the reservoirs is listed in Table 3-17.

Table 3-17. Dissolved Oxygen Scores in Reservoirs

	Sample Location		
Reservoir (Year)	**Forebay**	**Mid-reservoir**	**Embayment**
Chickamauga (2011)	Good	Good	Good
Fort Loudoun (2011)	Fair	Good	--
Great Falls	Not monitored	Not monitored	Not monitored
Kentucky (2011)	Fair	Fair	Poor
Nickajack (2012)	Good	--	--
Normandy (2010)	Poor	--	--
Wheeler (2011)	Poor	Good	Poor
Wilson (2012)	Poor	--	--

Source: TVA 2016b

Chlorophyll, a surrogate measure for the amount of algae (phytoplankton) in the water, is important because it provides insights into the level of primary productivity (basic level of the food web) within a water body and can provide a measure of nutrient enrichment. Although some level of phytoplankton production is essential to maintain a healthy aquatic community, as concentrations increase, uses can be affected differently. For example, fisheries such as largemouth bass in southeastern reservoirs can be enhanced as phytoplankton concentrations increase to relatively high levels. However, elevated phytoplankton concentrations are a concern because adverse ecological and use impacts could occur, such as reduced water clarity, more frequent algal blooms, higher oxygen demands and lower DO concentrations, increased periods of anoxic conditions and resultant anoxic byproducts (i.e., ammonia, sulfide, and dissolved manganese), more frequent water treatment problems, and higher water treatment cost. Almost all of the most recent ratings for chlorophyll within the reservoirs were poor, with the exception of the embayment at Chickamauga (good) and the mid-reservoir monitoring location in the Kentucky Reservoir (fair). The most recent chlorophyll scores for each of the reservoirs is listed in Table 3-18.

Table 3-18. Chlorophyll Scores in Reservoirs

Reservoir (Year)	Sample Location		
	Forebay	Mid-reservoir	Embayment
Chickamauga (2011)	Poor	Poor	Good
Fort Loudoun (2011)	Poor	Poor	--
Great Falls	Not monitored	Not monitored	Not monitored
Kentucky (2011)	Poor	Fair	Poor
Nickajack (2012)	Poor	--	--
Normandy (2010)	Poor	--	--
Wheeler (2011)	Poor	Poor	Poor
Wilson (2012)	Poor	--	--

Source: TVA 2016b.

Sediment quality is a measure of the amount of PCBs, pesticides, and metals in sediment on the bottom of the reservoir. Sediments at the bottoms of reservoirs serve as a repository for a variety of materials, especially chemicals that have a low solubility in water. If contaminated, bottom sediments can have adverse impacts on bottom fauna and can often be long-term sources of toxic substances to the aquatic environment. They may impact wildlife and humans through the consumption of contaminated food or water or through direct contact. These impacts may occur even though the water above the sediments meets water quality criteria. Thus, examination of reservoir sediments is useful to determine if toxic chemicals are present and if chemical composition is changing through time. The sediment quality in the reservoirs is generally fair, with the exception of Normandy (good) and the mid-reservoir location of Wheeler (good). The most recent sediment scores for each of the reservoirs is listed in Table 3-19.

Table 3-19. Sediment Scores in Reservoirs

Reservoir (Year)	Sample Location		
	Forebay	Mid-Reservoir	Embayment
Chickamauga (2011)	Fair	Fair	Fair
Fort Loudoun (2011)	Fair	Fair	--
Great Falls	Not monitored	Not monitored	Not monitored
Kentucky (2011)	Fair	Fair	Fair
Nickajack (2012)	Fair	--	--
Normandy (2010)	Good	--	--
Wheeler (2011)	Fair	Good	Fair
Wilson (2012)	Fair	--	--

Source: TVA 2016b

3.8.1.2 Water Supply

Water supply and waste water discharges are important considerations for water quality. The quality of the source water affects the cost and ability to meet local and state water supply criteria. The quality of a receiving water for a waste water discharge contributes to the ability of the water to assimilate the waste water without adverse impacts or the potential cost to provide additional treatment of the waste water prior to discharge to maintain an acceptable range of potential impact.

While water supply intakes and waste water discharges are regulated by the states under the National Pollutant Discharge Elimination System (NPDES), TVA permits the actual intake and outfall structures under Section 26a of the TVA Act. The most recent state permit/water withdrawal registration data for water supply withdrawals and waste water discharges directly from or to the reservoirs is provided in Table 3-20. This information does not include withdrawals or discharges in the watersheds.

Water withdrawals and wastewater discharges within the reservoirs as a whole are dominated by thermoelectric power generation, for which the majority of the volume is used as cooling water. For once-through cooling facilities, the water passes through the plant to absorb excess heat and is discharged at a higher temperature with virtually no consumptive use, or loss, of water. Overall, approximately 95 percent of the water withdrawn from the TVA system is returned to the system (TVA 2004).

Table 3-20. Direct Reservoir Average Daily Water Supply Withdrawals and Wastewater Discharges

Reservoir	2010 Water Withdrawal Volume (MGD)			2010 Wastewater Discharge Volume (MGD)		
	Municipal	Industrial	Thermo-electric	Municipal	Industrial	Thermo-electric
Chickamauga[1]	22.97	65.76	1,591.37	11.20	63.46	1,725.87
Fort Loudoun	52.66	0	0	50.07	0.02	0
Great Falls[2]	N/A	N/A	N/A	N/A	N/A	N/A
Kentucky[3]	5.93	70.87	1,173.75	1.33	89.31	1,198.00
Nickajack	40.78	5.93	0	48.43	7.76	0
Normandy	5.69	0	0	0	0	0
Wheeler[4]	82.01	70.21	2,749.90	35.63	62.66	2,744.09
Wilson	8.95	21.92	0	0	0	0

Source: (Gary Springston, TVA, personal communication, August 2016)

[1] Chickamauga Reservoir
Municipal water withdrawal data includes 10.89 million gallons per day (MGD) in the impounded portion of Hiwassee River.
All of the industrial water withdrawals are in the impounded portion of Hiwassee River.
Municipal wastewater discharge data includes 9.08 MGD in the impounded portion of Hiwassee River.
All of the industrial wastewater discharges are in the impounded portion of Hiwassee River.

[2] Great Falls is not within the Tennessee Valley; TVA's water supply group does not track withdrawals/discharges in the reservoir.

[3] Kentucky Reservoir:
Municipal wastewater discharge data includes 0.24 MGD in the impounded portion of Duck River.
Municipal wastewater discharge data includes 0.15 MGD in the impounded portion of Big Sandy River.
Municipal wastewater discharge data includes 0.30 MGD in the impounded portion of Beech River.
Municipal wastewater discharge data includes 0.03 MGD in the impounded portion of Jonathan Creek.

[4] Wheeler Reservoir:
Municipal water withdrawal data includes 5.16 MGD in the impounded portion of Elk River.
Industrial water withdrawal data includes 60.09 MGD for a facility that is now idle.
Industrial wastewater discharge data includes 57.32 MGD for a facility that is now idle.

3.8.2 Environmental Consequences

The major source of potential adverse impacts to reservoir water quality is from land uses that result in increases in soil erosion and sediment transported into the reservoir, either through construction activities or as an on-going condition due to increases in runoff. Increases in runoff due to land cover changes (e.g., conversion from wooded, dense vegetation to developed land with impervious surfaces and higher runoff areas) can result in on-going erosion of conveyances and streams. Additionally, conversion of natural land cover to a developed condition generally results in a potential for higher loading of pollutants to receiving streams. Nutrients applied for maintenance of landscaping, such as nitrogen and phosphorus, typically produce increases in surface runoff. Higher loadings result from accumulation of various pollutants on impervious surfaces that may then be washed off and conveyed directly to receiving streams or reservoirs by artificial drainage systems without the opportunity for filtering of pollutants or infiltration. Potential impacts to water quality likely would be greater from parcels allocated to Zone 2 (Project Operations), Zone 5 (Industrial) or Zone 6 (Developed Recreation) where more development and intensive land use could occur. In addition, activities allowed in Zone 7 (Shoreline Access)

have the potential to have a direct impact on water quality as these parcels are located on the reservoirs where land slopes tend to be relatively steep, which increases the potential for soil erosion. However given the magnitude of development allowed in these zones, these impacts would be minor and localized.

3.8.2.1 Alternative A – No Action Alternative

Under Alternative A, Approximately 81 percent of the land around the eight reservoirs would be allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation) which have the lowest potential to affect water quality. Therefore, under this alternative the majority of the acreage within the reservoirs would be allocated to zones which minimize potential impacts to water quality.

Approximately 14 percent of the land around the reservoirs would be allocated to Zone 2, Zone 5 and Zone 6 (Project Operations, Industrial, and Developed Recreation, respectively). Land uses allowed in these land management zones have the greatest potential for impacting water quality due to runoff and erosion from ground-producing activities, changes to the existing land cover and an increase in impervious surface. In addition, uses allowed in these land management zones also have the greatest potential for increasing water supply demands and wastewater discharges. However, the extent of impacts would be dependent on the specifics of future development. Construction activities, including land disturbing activities of 1.0 acre or more, are regulated under the states' NPDES programs for stormwater discharges from construction activities to control water quality of discharges. New facilities with permitted discharges would be required to meet permit limits specifically designed to prevent degradation of applicable water quality criteria. Further, any proposed land use would be required to protect water quality through either restricted development or the commitment to use BMPs to minimize impacts.

Due to the required project-specific environmental review and application of TVA Section 26a General and Standard Conditions/BMPs (TVA 2005a), and state regulatory programs for water supply withdrawals and wastewater discharges, impacts to water quality as a result of future developments would be minor.

3.8.2.2 Alternative B – Proposed Land Use Plan Alternative

Alternative B includes a small reduction in the portion of TVA-managed land allocated to Zone 3 and Zone 4 (Sensitive Resource Management and Natural Resource Conservation) and an increase in the land area allocated to Zone 2, Zone 6 and Zone 7 (Project Operations, Industrial, and Developed Recreation, respectively)(see Table 2-7). However, as described in Section 3.2, many of the changes in zone reallocation associated with Alternative B generally correspond to a "re-alignment" to reflect current land uses and conditions on each parcel which would not impact water quality. However, the potential for future development to impact water quality would be slightly higher under this alternative as more land on the eight RLMPs would be allocated to zones that would not be protective of water quality. This impact would be minor for reasons identified under Alternative A.

3.9 Wetlands

3.9.1 Affected Environment

The U.S. Army Corps of Engineers (USACE) regulates the discharge of fill material into waters of the United States, including wetlands pursuant to Section 404 of the CWA (33 USC 1344). Additionally, EO 11990 (Protection of Wetlands) requires federal agencies to avoid, to the extent possible, adverse impact to wetlands and to preserve and enhance their natural and beneficial values.

Wetlands are defined by TVA Environmental Review Procedures (TVA 1983) as: "[T]hose areas inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances do or would support, a prevalence of vegetation or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, mud flats, and natural ponds." Wetlands are ecologically important because of their beneficial effect on water quality, their moderation of flow regimes by retaining and gradually releasing water, their value as wildlife habitat, and as areas of botanical diversity. Wetlands exist within and adjacent to TVA reservoirs and are influenced by surface water and groundwater connections to the water levels in these reservoirs.

Land use/ land cover data generated by the National Land Cover Database (Homer et al. 2011) indicates that wetlands comprise between 0.01 to 32.6 percent of land cover in the reservoirs (Section 3.5 Terrestrial Ecology). The reservoir with the highest percentage of wetland land cover is Wheeler (32.6 percent) and the lowest percentage is in the Great Falls Reservoir (0.01 percent).

Large-scale analysis of land cover data over time and by ecoregion provides information on the status and trends of wetland resources. The eight reservoirs are located in five ecoregions, Ridge and Valley, Interior Plateau, Southwestern Appalachians, Southeastern Plains, and Mississippi Loess Plains. The Ridge and Valley and Interior Plateau had a relatively low rate of overall land change when compared to other Eastern ecoregions. The Southwestern Appalachians and Mississippi Loess Plains had a moderately high level of change, while the Southeastern Plains was very These data indicate an overall loss of approximately 203,000 acres of wetland land cover from 1973 to 2000 (Drummond 2014) between these five ecoregions. This trend is in contrast to that seen in the conterminous United States from 1998 to 2004, which saw a minor overall increase (0.2 percent) in freshwater wetlands (Dahl 2006).

For this section, the type and extent of wetlands within the TVA reservoirs are derived from the National Wetland Inventory (NWI) database and supplemented with previous on-the-ground surveys done by TVA where available. Overall, palustrine wetlands are the predominant wetlands in the reservoirs. As described by Cowardin et al. (1979), these are nontidal wetlands dominated by trees, shrubs, persistent emergent vegetation, and emergent mosses or lichens. These wetlands include bottomland hardwood forests and upland swamps (forested wetlands), scrub-shrub wetlands, beaver ponds (aquatic-bed or emergent wetlands), wet meadows and marshes (emergent wetlands), and highland bogs (forested, scrub-shrub, or emergent wetlands that have organic soils). Lacustrine (i.e., related to a lake) and riverine (i.e., related to a river) systems are also wetland types found within the region. These wetlands consist of aquatic beds containing floating or submersed aquatic plants.

Palustrine forested wetlands are the most abundant type of wetland found in the reservoirs and make up approximately 65 percent of all wetland resources (Table 3-21). The least common wetland type along the reservoirs is scrub-shrub. Details on the types of wetlands within each reservoir are discussed in Volumes II-IV.

Small areas of emergent/scrub-shrub wetlands (typically less than 0.10 acre) are associated with reservoir shorelines and coves. Isolated wetlands such as bogs, seeps, and fens are relatively rare considering that most wetlands are located adjacent to the reservoir. Aquatic bed wetlands and mudflats are seasonal habitats; aquatic bed wetlands are associated with the summer growth of aquatic vegetation and are relatively uncommon on the reservoirs. Mudflat habitats are more common as these habitats are associated with reservoir drawdowns. Forested wetlands occur on lower-lying, undisturbed areas and along tributary streams.

Table 3-21. Summary of Wetlands on TVA Reservoirs by Area and Type

Reservoir	Wetland Type[1]				
	Emergent (acres)	Forested (acres)	Open Water (acres)	Scrub-Shrub (acres)	All Types (acres)
Chickamauga	0.03	0.2	104.8	0.08	105.1
Fort Loudoun	1.7	4.6	117.5	--	123.8
Great Falls	2.2	--	5.0	1.1	8.3
Kentucky	2,213.8	15,659.0	3,462.7	2,202.6	23,538.2
Nickajack	22.8	--	79.3	2.8	104.9
Normandy	4.0	109.6	195.8	--	309.4
Wheeler	2,703.4	11,411.2	1,863.3	1,416.1	17,404.1[1]
Wilson	7.9	32.5	19.1	--	59.5
Total	**4,955.8**	**27,217.1**	**5,847.5**	**3,622.7**	**41,653.3**

Source: USFWS 2016b

[1] Includes 10.13 acres of unknown wetland type

Wetlands tend to be smaller and do not occur as frequently on tributary reservoirs such as Great Falls and Normandy because of the relatively steep drawdown zones, the rolling to steep topography of adjacent lands, shoreline disturbance caused by wave action, and the lower predictability and shorter duration of summer pool levels.

3.9.2 Environmental Consequences

Ground-disturbing activities, including the placement of fill, and vegetation removal would be the primary source of potential impacts to wetlands and wetland functions. The potential for ground disturbing activities would be greatest in land allocated to Zone 5 (Industrial). Impact to wetlands could also occur on land allocated to Zone 2 (Project Operations), or Zone 6 (Developed Recreation) where land uses that would require ground disturbing activities are allowed. Development on land allocated to Zone 7 (Shoreline Access), would require a limited amount of ground disturbance. Minimal ground disturbance would occur on land allocated Zones 3 (Sensitive Resource Management) and 4 (Natural Resource Conservation). Under either of the alternatives, activities in wetlands present on any parcels would be subject to EO 11990 and Section 404(b)(1) of the CWA. Any impacts to wetlands associated with ongoing or future project operations would be evaluated under NEPA and associated permitting requirements and minimized to the extent practicable.

3.9.2.1 Alternative A – No Action Alternative

As demonstrated in Table 3-22, the majority (89.5 percent) of the mapped wetland features under Alternative A are located in land allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation), which have the smallest potential for activities that would impact wetlands. The likelihood of future development in parcels allocated to these zones is less than those allocated to Zones 2 and 5 (Project Operations and Industrial). However, any future projects proposed for these parcels would be reviewed to assess potential effects to wetlands in accordance with EO 11990 and Section 404(b)(1) of the CWA and impacts would be avoided or mitigated to the extent practicable. Furthermore, on-going land use of parcels with existing committed land uses were previously reviewed and are not adversely affecting any on-site wetlands.

Table 3-22. Wetland Types Based on Land Management Zone Allocation-Alternative A

Zone	Wetland Type				
	Emergent (acres)	Forested (acres)	Scrub Shrub (acres)	Open Water (acres)	Total (acres)
Zone 2 – Project Operations	34.3	2,097.9	245.0	268.6	**2,645.8**
Zone 3 – Sensitive Resource Management	43.0	2,419.5	113.5	442.0	**3,018.1**
Zone 4 – Natural Resource Conservation	4,815.4	21,873.1	3,204.6	4,362.4	**34,255.4**
Zone 5 – Industrial	4.1	103.0	13.5	174.9	**295.4**
Zone 6 – Developed Recreation	19.5	279.9	12.3	328.0	**639.8**
Zone 7 – Shoreline Access	16.7	466.5	33.9	258.7	**775.7**
No current zone designation	--	--	--	13.0	**13.0**

Source: USFWS 2016b

Additionally, there could be some minor and indirect impacts to wetlands associated with dispersed recreation and camping activities on land allocated to Zones 6 and 7 (Developed Recreation and Shoreline Access), where minimal clearing of vegetation occurs on the shoreline and around tent and picnic areas. Overall, indirect impacts associated with this alternative would be minor, as any localized trimming or clearing of wetland vegetation would have a negligible effect on wetland resources within the overall project area. Therefore, impacts to wetlands under Alternative A would be minor since the large majority of wetland are located on parcels allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation).

3.9.2.2 Alternative B – Proposed Land Use Plan Alternative

As shown in Table 3-23, most of the wetland resources (87.2 percent) under Alternative B are located in parcels allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation), which have the least potential for ground disturbance.

Table 3-23. Wetland Types Based on Land Management Zone Allocation – Alternative B

Zone	Wetland Type				
	Emergent (acres)	Forested (acres)	Scrub Shrub (acres)	Open Water (acres)	Total
Zone 2 – Project Operations	58.5	2,215.2	212.4	339.7	**2,825.9**
Zone 3 – Sensitive Resource Management	112.3	2,785.5	209.3	480.7	**3,587.7**
Zone 4 – Natural Resource Conservation	4,711.8	20,793.3	3,038.1	4,190.3	**32,733.5**
Zone 5 – Industrial	3.0	140.0	34.7	206.0	**383.7**
Zone 6 – Developed Recreation	25.0	346.1	68.7	373.6	**813.5**
Zone 7 – Shoreline Access	22.2	959.8	59.6	257.3	**1,298.9**

Source: USFWS 2016b

Implementation of Alternative B would result in the reallocation of 268.4 acres of wetlands into land management zones with a greater potential for impact, Zones 2 and 5 (Project Operations and Industrial). Overall, this reallocation is approximately 2.2 percent of the wetlands within the eight RLMPs. The greatest potential impact to wetland resources is attributable to a reallocation of 1,521.0 acres of land that is currently allocated as Zone 4 (Natural Resource Conservation). However, any future projects proposed for these parcels would be reviewed to assess potential effects to wetlands in accordance with EO 11990 and Section 404(b)(1) of the CWA and impacts would be avoided or mitigated to the extent practicable.

As discussed for Alternative A, some minor and indirect impacts to wetlands could occur under this alternative. Informal recreation and camping activities could result in some minimal clearing of vegetation on parcels allocated to Zones 6 and 7 (Developed Recreation and Shoreline Access). Overall, impacts associated with this alternative would be minor.

3.10 Floodplains

3.10.1 Affected Environment

As a federal agency, TVA is subject to the requirements of EO 11988 (Floodplain Management). The objective of EO 11988 is “to avoid to the extent possible the long and short term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative…” (43 Federal Register 6030 [10 February 1978]). The EO is not intended to prohibit floodplain development in all cases, but rather to create a consistent government policy against such development under most circumstances. It applies to all federal agencies that acquire, manage, or dispose of federal lands and facilities; undertake, finance, or assist construction and improvements; and conduct activities and programs affecting land use, including planning, regulating, and licensing. The EO requires that agencies avoid the 100-year floodplain unless there is no practicable alternative. The 500-year flood elevation is used to establish the “critical action floodplain.” A “critical action” is defined in the Floodplain Management Guidelines (U.S. Water Resources Council 1978)

as any activity for which even a slight chance of flooding would be too great. The 500-year flood elevation is also used to control flood-damageable development for TVA projects as well as residential and commercial development on TVA lands.

The 100- and 500-year flood elevations for Chickamauga, Fort Loudoun, Great Falls, Kentucky, Nickajack, Normandy, Wheeler and Wilson reservoirs are provided in Appendix D, Tables D-12 through D-18. Descriptions of these floodplains are provided in the eight RLMPs (Volumes II through IX).

As described in Table 3-1, each of the reservoirs vary in shoreline length, variation in pool elevation and flood storage volume. While flood storage volume is not equivalent to floodplain area it does reflect the overall benefit and value of each reservoir in providing flood abatement. Flood storage volumes vary based on elevation and terrain within the reservoir, shoreline length and control pool elevation and range from a low of 30,000 acre-feet at Great Falls Reservoir to 4,008,000 acre-feet at Kentucky Reservoir.

3.10.2 Environmental Consequences

3.10.2.1 Alternative A – No Action Alternative

Under Alternative A, TVA would not take any action to align or complete plans of the TVA managed lands on the eight reservoirs, and floodplain reviews would continue following existing land use designations. Future proposals would be evaluated for consistency with existing land use agreements, EO 11988, and/or current allocations as defined under the Forecast or Multiple Use Tract Allocations. Potential projects affecting floodplains would consist of water-dependent facilities, repetitive actions and non-repetitive actions. Compared to the overall extent of a reservoir, potential impacts are expected to be limited in scope and area; therefore, the potential impacts to reservoir flood storage volumes, floodplains and floodplain values would be minor.

3.10.2.2 Alternative B – Proposed Land Use Plan Alternative

Under Alternative B, a substantial portion (77.3 percent) of the TVA land in the eight RLMPs would be allocated to Zones 3 (Sensitive Resource Management) and 4 (Natural Resource Conservation), in which construction of facilities or structures within the floodplain is not anticipated. Any future projects associated with land allocated to Zones 2 (Project Operations), 5 (Industrial) or 6 (Developed Recreation) would be evaluated in accordance with EO 11988. However, for the reasons stated under Alternative A, the potential for adverse impacts to floodplains and their natural and beneficial floodplain values would be minor.

3.11 Air Quality and Climate Change

3.11.1 Affected Environment

3.11.1.1 Air Quality

The NAAQS have been established to protect the public health and welfare with respect to six pollutants: particulate matter, sulfur dioxide, carbon monoxide, ozone, nitrogen dioxide, and lead. In accordance with the CAA Amendments of 1990, all counties are designated with respect to compliance, or degree of noncompliance, with NAAQS. These designations are either attainment, nonattainment, or unclassifiable. An area with air quality better than the NAAQS is designated as “attainment;” an area with air quality worse than the NAAQS is designated as “non-attainment.” Non-attainment areas are further classified as extreme, severe, serious, moderate, and marginal. An area may be designated as unclassifiable when there is a lack of data to form a basis of attainment status. New or expanded emissions sources are carefully controlled in areas designated as nonattainment for a pollutant. All reservoirs are in counties designated as attainment except for Fort Loudoun Reservoir, which is located in counties that are in nonattainment for $PM_{2.5}$ (Table 3-24). The state of Tennessee, however, anticipates submitting a re-designation request in October 2016 to the USEPA to have the designation changed to attainment.

Table 3-24. Air Quality Attainment Status by County

Reservoir	Counties	Air Quality Status
Chickamauga	Bradley, Hamilton, Meigs, McMinn, Rhea (TN)	TN – all counties in attainment
Fort Loudoun	Blount, Knox, Loudon (TN)	TN – Blount, Knox and Loudon counties are moderate nonattainment for $PM_{2.5}$ 2012 annual standards (re-designation request anticipated in October 2016) (USEPA 2016b)
Great Falls	Warren, White (TN)	TN – all counties in attainment
Kentucky	Callow, Livingston, Lyon (KY); Benton, Decatur, Hardin, Henry, Houston, Humphreys, Perry, Stewart, Wayne (TN)	KY – all counties in attainment TN – all counties in attainment
Nickajack	Hamilton, Marion (TN); Dade (GA)	GA – county in attainment TN – all counties in attainment
Normandy	Bedford, Coffee (TN)	TN – all counties in attainment
Wheeler	Lauderdale, Lawrence, Limestone, Madison, Marshall, Morgan (AL)	AL – all counties in attainment
Wilson	Colbert, Lauderdale (AL)	AL – all counties in attainment

Source: USEPA 2016b

Prevention of significant deterioration (PSD) regulations are used to limit air pollutant emissions from new or expanding sources in attainment or unclassifiable areas. Under these regulations, some national parks and wilderness areas are designated PSD Class I air quality areas and are afforded special protection. There are eight Class I areas within approximately 100 miles of the eight RLMPs, including Sipsey Wilderness, Alabama; Mammoth Cave National Park, Kentucky; Mingo Wilderness, Missouri; Linville Gorge Wilderness Area, North Carolina; Joyce Kilmer/Slickrock Wilderness, North Carolina; Shining Rock Wilderness Area, North Carolina; the Great Smoky Mountains National Park,

North Carolina/Tennessee; and Cohutta Wilderness Area, Tennessee/Georgia. The closest Class I area is the Great Smoky Mountains National Park located near the Fort Loudoun Reservoir.

Sources of air emissions within the eight RLMPS include industrial development, public works projects, developed recreation sites (e.g., marinas) motorized watercraft (motor boats, jet skis), and other vehicle traffic. Short-term construction activities generate air emissions from the use of equipment, trucks and personal vehicles as well as fugitive dust or particulate matter from disturbed areas and travel on unpaved roads.

Air emissions would be greatest from uses allowed in lands allocated to Zone 5 (Industrial). Based on the types of activities allowable on lands allocated to Zone 2 (Project Operations) and Zone 6 (Developed Recreation) (boat traffic around locks and dams, operating facilities, construction of public works projects and motor craft and vehicle use) air emissions would be minor. Uses allowed in lands allocated to Zones 3 (Sensitive Resource Management) 4 (Natural Resource Conservation) and 7 (Shoreline Access) generate little or no air emissions.

3.11.1.2 Climate Change

"Climate change" refers to any substantive change in measures of climate, such as temperature, precipitation, or wind (USEPA 2016c). The 2014 National Climate Assessment concluded that global climate is projected to continue to change over this century and beyond. The amount of warming projected beyond the next few decades, by these studies, is directly linked to the cumulative global emissions of greenhouse gasses (e.g., carbon dioxide [CO_2], methane) and particles. By the end of this century, the 2014 National Climate Assessment concluded a 3° Fahrenheit (F) to 5°F rise can be projected under the lower emissions scenario and a 5°F to 10°F rise for a higher emissions scenario (Melillo et al. 2014).

Generally, climate change results in Earth's lower atmosphere becoming warmer and moister, resulting in the potential for more energy for storms and certain severe weather events.

TVA has, in accordance with the requirements of EO 13514 – Federal Leadership in Environmental, Energy, and Economic Performance and EO 13653 – Preparing the United States for the Impacts of Climate Change, adopted a climate adaptation plan that establishes adaptation planning goals and describes the challenges and opportunities a challenging climate may present to its mission and operations. The goal of TVA's adaptation planning process is to ensure that TVA continues to achieve its mission and program goals and to operate in a secure, effective and efficient manner in a changing climate.

TVA manages the effects of climate change on its mission, programs and operations within its environmental management processes. TVA's Environmental Policy includes the specific objective of stopping the growth in volume of emissions and reducing the rate of carbon emissions by 2020 by supporting a full slate of reliable, affordable, lower-CO_2 energy-supply opportunities and energy efficiency.

Activities that contribute CO_2 emissions include industrial activities, manufacturing activities, barge, truck, and personal use: motorized watercraft traffic; and other construction involving the use of fossil-fuel-powered equipment (e.g., bulldozers, loaders, haulers,

trucks, generators, etc.). Reservoir land use that generate CO_2 emissions primarily occur in Zones 2, 5 and 6 (Project Operations, Industrial and Developed Recreation). Activities that decrease CO_2 emissions occur primarily on lands allocated for Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation). For example, protect forested areas that absorb and store $C0_2$ from the atmosphere via a process known as carbon sequestration reduce CO_2 in the atmosphere.

3.11.2 Environmental Consequences

The impacts described below are based on planning level assessments for air emissions to be generated as a result of the land that would be allocated to each of the TVA land management zones. However, because current uses would not change, impacts to ambient air quality would be minor under both alternatives.

3.11.2.1 Alternative A – No Action Alternative

Potential air emission impacts from industrial development would depend on the type of industry that might locate on these parcels. Future projects would be subject to federal, state, and local air quality regulations to help control emissions and avoid impacts to air quality. Only 1.5 percent of the land on the eight reservoirs would be allocated to Zone 5 (Industrial). Given the relatively small acreage allocated to Zone 5 (Industrial) and types of facilities and activities in the eight reservoirs, impacts to air quality are anticipated to be negligible.

The percentage of land allocated to Zone 2 (Project Operations) and Zone 6 (Developed Recreation) accounts for approximately 12 percent of the land area managed on the eight reservoirs. As emissions from developed recreation and dam operation activities are typically very minor and the overall percentage of land allocated to these zones is small, potential impacts to air quality would be negligible. In the event that a development is proposed for an areas located in or with the potential to affect a nonattainment area, such as at the Fort Loudon Reservoir, TVA would require a conformity applicability determination pursuant to regulations implementing Section 176(c) of the CAA to assure compatibility with measures in local plans for achieving attainment.

Under Alternative A, approximately 81.4 percent of TVA lands on the eight reservoirs would remain allocated as Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation), which are lands on which activities are unlikely to result in greenhouse gas emissions and highly likely to provide carbon sequestration. Approximately 14 percent of lands are allocated for Zones 2, 5 and 6 (Project Operations, Industrial and Developed Recreation), where greenhouse gas emissions may occur. As noted above, only 1.5 percent of these lands would be allocated for industrial uses, the use most likely to result in future emissions of greenhouse gases.

3.11.2.2 Alternative B – Proposed Land Use Plan Alternative

Land allocations under Alternative B that differ from current allocations or uses under Alternative A were primarily proposed to reflect existing conditions and suitable uses of land. Under this alternative, a slightly higher percent of land would be allocated to Zone 2 (Project Operations), Zone 5 (Industrial) and Zone 6 (Developed Recreation), as compared to Alternative A (see Table 2-7).

Approximately 2 percent of the land in the eight RLMPs is allocated to Zone 5 (Industrial). Potential air emissions from uses would depend on the type of industry that might locate to these three reservoirs in the future. However, an appropriate level of environmental review

would be required to document the extent of expected air quality. Therefore given the relatively small amount of land allocated to Zone 5 (Industrial) and as future development would be subject to federal, state, and local air quality regulations, air quality impacts are anticipated to be negligible.

The amount of land allocated in the eight RLMPs to Zone 2 (Project Operations) and Zone 6 (Developed Recreation) would increase by 1.1 percent and 1.2 percent, respectively. Although activities allowed in these zones would support uses with the potential to impact air quality, air emissions are expected to have a negligible impact for the reasons described under Alternative A.

Under Alternative B, TVA's proposed changes to current allocations and uses would result in a decrease in lands allocated for Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation), from 81.4 percent of all lands to 77.3 percent. Fewer lands would be available for potential carbon sequestration. TVA's proposed changes would also increase areas allocated to Zone 2, Zone 5 and Zone 6 (Project Operations, Industrial and Developed Recreation, respectively), from approximately 14 percent to 17.2 percent. Zone 1 (Industrial) areas would increase by 0.9 percent (or more than 1,300 acres), thereby increasing the potential for greenhouse gas emissions.

Under Alternative B, approximately 5,590 acres of lands that are currently allocated to Zones 3 and 4 (under Alternative A) would be re-allocated to Zones 2, 5, 6, or 7. It is unlikely that all of these lands would be fully developed during the life of the RLMP and the eventual uses of these lands is currently speculative. However, for perspective on the potential impacts of such a conversion on carbon stock, TVA used a quantification tool to estimate the carbon sequestration that may be lost from such a conversion. Such an estimation requires making several conservative analytical assumptions. In addition to assuming that all vegetation is cleared from the 5,590 acres during the life of the RLMP, if TVA assumes that all of the 5,590 acres are currently forested (the land cover with the greatest potential carbon sink) and estimates that the forest composition and age is typical for the region (Alabama, Kentucky, and Tennessee), TVA estimates that the conversion of these lands would result in the loss of carbon stock equivalent to 4,087 metric tons of carbon sequestered in one year (COLE 2016). As noted above, additional air emissions would occur during development activities and an appropriate level of environmental review would be required to document the extent of additional greenhouse gas emissions.

Alternative B would likely result in greater quantities of greenhouse gas emissions and fewer carbon sinks than Alternative A.

3.12 Cultural and Historic Resources

3.12.1 Affected Environment

Cultural resources include prehistoric and historic archaeological sites, districts, buildings, structures, and objects, as well as locations of important historic events that lack material evidence of those events. Cultural resources that are listed, or considered eligible for listing, on the National Register of Historic Places (NRHP) are called historic properties. To be considered an historic property, a cultural resource must possess both integrity and significance. A historic property's integrity is based on its location, design, setting, materials, workmanship, feeling, and association. The significance is established when historic properties meet at least one of the following criteria: (a) are associated with important historical events or are associated with the lives of significant historic persons;

(b) embody distinctive characteristics of a type, period, or method of construction; (c) represent the work of a master, or have high artistic value; or (d) have yielded or may yield information important in history or prehistory (36 CFR Part 60.4).

Section 106 of the NHPA requires federal agencies to consider the effects of their proposed undertakings on historic properties and provide the Advisory Council on Historic Preservation an opportunity to comment on those effects. TVA determined that the Proposed Action Alternative is an “undertaking” as defined by the regulations under NHPA. Once an action is determined to be an undertaking, the regulations require agencies to consider whether the proposed activity has the potential to impact historic properties. If the undertaking is such an activity, then the agency must follow the following steps: (1) involve the appropriate consulting parties; (2) define the area of potential effects (APE); (3) identify historic properties in the APE; (4) evaluate possible effects of the undertaking on historic properties in the APE; and (5) resolve adverse effects (36 CFR § 800.4 through 800.13). An APE is defined as the “geographic area or areas within which the undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR § 800.16.). Concerning cultural resources, the APE is taken as the affected environment for purposes of this EIS. TVA defined the APE to be the approximately 16427.2-acre area where TVA is proposing a zone change.

Section 106 of the NHPA requires federal agencies to consult with the respective SHPO and Indian tribes when proposed federal actions could affect historic and cultural resources, including archaeological resources, which are also protected under the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act, in addition to the NHPA.

3.12.1.1 Archaeological Resources

The Tennessee Valley has a rich cultural heritage. The temperate climate and abundant resources attracted nomadic hunters-gatherers into the region by 13,500 years ago. Through centuries of continuity and conflict, a rich diversity of Native American cultures evolved. Human occupation in the Valley includes five broad cultural periods: Paleo-Indian (Older than 9,200 BC), Archaic (9,200-1,000 BC), Woodland (1,000 BC-AD 900), Mississippian (AD 900-1,500), and Historic (AD 1,500-present). Prehistoric land use and settlement patterns vary during each period, but short- and long-term habitation sites are generally located on flood plains and alluvial terraces along rivers and tributaries. Specialized campsites tend to be located on older alluvial terraces and in the uplands. In the early Historic period, this location was largely populated by members of the Historic Indian tribes. The influx of European settlers into the region forced cession of Indian lands.

The subsequent decades were marked by growth of urban centers, large plantations, and smaller subsistence farming homesteads. The construction of railroads furthered the growth of industry in the valley. The Civil War played a significant role in the development of the region. Archaeological resources associated with the antebellum and post-antebellum periods include remains associated with individual farmsteads or larger scale plantations and civic, ceremonial, and industrial sites.

Archaeological investigations in the TVA region began in the 19th century with the explorations of Cyrus Thomas, C.B. Moore, and the Smithsonian Institute. These early investigations focused on larger sites such as mound complexes. The earliest TVA related archaeological surveys occurred in the 1930s and 1940s prior to inundation of Wheeler, Chickamauga, and Kentucky (Webb 1939; Lewis and Kneberg 1995). These surveys,

staffed by New Deal public works programs, were opportunistic in nature focusing on the excavation of large village sites. Constructed in 1942, Fort Loudoun was not subject to the same level of intensive survey as attention was being diverted to World War II. Archaeological investigations were conducted prior to the impoundment of the Duck River for the Normandy Reservoir (Faulkner and McCollough 1973). TVA acquired Wilson Dam, Great Falls, and Hales Bar Dam (resulting in the Nickajack impoundment) subsequent to inundation.

In recent decades, TVA fee-owned land has been subject to both systematic and opportunistic archaeological surveys for TVA undertakings and land planning actions. Because survey coverage below summer pool elevation is inconsistent and due to the lack of comprehensive data on survey coverage throughout TVA's history, it is difficult to estimate the percentage of TVA lands associated with the RLMP that have been systematically surveyed. Table 3-25 provides estimates regarding the approximate percentage of lands subject to systematic survey for each of the Reservoirs and the number of sites identified. Many additional archaeological sites are likely present that have not been recorded as a result of the limited surveys conducted.

Table 3-25. Approximate Number of Archaeological Sites Identified on TVA Lands and Acres Systematically Surveyed per Reservation

TVA Reservation/Property	% Above Pool Land Systematically Surveyed	Total Number of Sites Recorded*	Sites Located with Parcels Subject to Zone Reallocation
Nickajack	15%	110	13
Normandy	Unknown	43	30
Chickamauga	8%	558	207
Kentucky	1%	1835	257
Wheeler	8%	1331	148
Wilson	80%	30	0
Great Falls	<1%	0	0
Fort Loudon	<1%	96	17

3.12.1.2 Historic Structures

A systematic identification survey for historic structures has not conducted for TVA fee-owned land. Based on limited surveys, approximately 1,536 historic structures have been recorded on or near these Reservoirs (Table 3-26). The acquisition of land for construction of the TVA reservoirs resulted in the removal of many structures and other man-made features. The structures that remain represent all historical periods including individual farmsteads or larger scale plantations, civic or religious sites such as churches, cemeteries or schools, and industrial sites such as mills. The formation of reservoirs on the Tennessee River and its tributaries permanently changed the cultural geography of those regions. Due to the historic significance associated with the development of TVA Nickajack, and Chickamauga Dams and contributing structures are considered eligible for listing in the NRHP. Wheeler Dam has recently been listed to the NRHP. Although not constructed by TVA, Great Falls also is considered eligible for the NRHP. Wilson Dam is listed as a National Historic Landmark.

Table 3-26. Number of Historic Structures Surveyed

Project and Location	Recorded Historic Structures	NRHP-Eligible or Potentially Eligible Historic Structures	NRHP-Listed Historic Structures/Districts
Wilson, AL	21	1	4
Wheeler, AL	546	1	7
Nickajack, TN	50	1	0
Chickamauga, TN	138	1	10
Fort Loudoun, TN	139	1	2
Normandy, TN	93	1	4
Great Falls, TN	111	1	0
Kentucky, KY/TN	438	1	12

3.12.2 Environmental Consequences

Federal agencies are required by the NHPA and by the NEPA to consider the possible effects of their undertakings on historic properties. *Undertaking* means any project, activity, or program, and any of its elements that has the potential to have an effect on a historic property and that is under the direct or indirect jurisdiction of a federal agency or is licensed or assisted by a federal agency. Considering an undertaking's possible effects on historic properties is accomplished through a four-step review process outlined in Section 106 of NHPA. These steps are: (1) initiation (defining the undertaking and the area of potential effects, or APE, and identifying the parties who should be consulted in the process); (2) identification (studies to determine whether cultural resources are present in the APE and whether they qualify as historic properties); (3) assessment of adverse effects (determining whether the undertaking would result in damaging the qualities that make the property eligible for the National Register); and (4) resolution of adverse effects (by avoidance, minimization, or mitigation). Throughout the process the agency must consult with the appropriate State Historic Preservation Officer, federally-recognized Indian tribes that have an interest in the undertaking, and any other party with a vested interest in the undertaking.

A project may have effects on a historic property that are not adverse, if those effects do not diminish the qualities of the property that identify it as eligible for listing on the National Register. However, if the agency determines (in consultation) that the undertaking's effect on a historic property within the APE would diminish any of the qualities that make the property eligible for listing on the National Register (based on the criteria for evaluation at 36 CFR Part 60.4), the effect is said to be adverse. Examples of adverse effects would be ground disturbing activity in an archaeological site, or erecting structures within the viewshed of a historic building in such a way as to diminish the structure's integrity of feeling or setting. Adverse effects must be resolved. Resolution may consist of avoidance (such as redesigning a project to avoid impacts or choosing a project alternative that does not result in adverse effects), minimization (such as redesign to lessen the effects, or planting visual screenings), or mitigation. Adverse effects to archaeological sites are typically mitigated by means of excavation to recover the important scientific information contained within the site. Mitigation of adverse effects to historic structures sometimes involves thorough documentation of the structure by compiling historic records, studies, and photographs. Agencies are required to consult with SHPOs, tribes, and others throughout

the process and to document adverse effects to historic properties resulting from agency undertakings.

TVA will continue to conduct project related reviews of proposed activities in TVA controlled areas where such activities could affect historic properties. Historic properties within these areas will be avoided and protected whenever possible. If avoidance is not possible, proper procedures would be implemented to mitigate any potential effects on the historic property. Under either alternative, the adverse effects to significant archaeological resources will be mitigated through data recovery excavations or by other means pursuant to 36 CFR Part 800.

3.12.2.1 Alternative A – No Action Alternative

When developing many of the existing land use plans, TVA reviewed information and records about known cultural resources when determining the appropriate land use allocations, thereby protecting these resources. Those protections would continue under Alternative A on reservoirs for which RLMPs were previously developed. On reservoirs for which no planning has been conducted, the presence of cultural resources has not been considered when determining appropriate uses. However, for all reservoirs, site-specific activities proposed in the future would continue to be subject to review under 36 CFR 800 and approved, approved with conditions, or denied according to the presence/absence of historic properties and the potential of the activity to adversely affect historic properties.

If a historic property cannot be avoided or effects cannot be minimized and mitigation is required, appropriate archaeological investigation would be necessary, and potentially impacted resources would be mitigated in consultation with the applicable SHPO, federally recognized tribes, and other consulting parties. All projects and cultural resources would be subject to the regulatory requirements of the NHPA.

3.12.2.2 Alternative B – Proposed Land Use Plan Alternative

When developing its proposed RLMP for each reservoir, TVA reviewed information and records about known cultural resources on its lands prior to proposing land use zone allocations. Parcels with important cultural resources are proposed for Zone 3 (Sensitive Resource Management) or Zone 4 (Natural Resource Conservation) management, because surface disturbing activities would generally not be permissible in these zones. Under Alternative B, there are commitments for the management of cultural resources within Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation), effectively preserving resources within the planned parcels. The commitments require TVA Cultural Resources staff would review all proposed activities that occur on parcels and that have the potential to impact historic properties.

As under Alternative A, regardless of the zone allocation given to a parcel under the RLMP, TVA Cultural Resources staff would review any proposed site-specific development to determine whether the development would impact known and/or unknown historic properties. If the resources cannot be avoided, then further investigations would be required to determine the resources' eligibility for inclusion in the NRHP. For any proposed undertaking, TVA would take necessary steps to ensure compliance with the regulatory requirements under NHPA and consider the development's effects as they are proposed. TVA will comply with the NRP Programmatic Agreement executed in 2011 in consultation with the SHPOs, Advisory Council of Historic Preservation and federally recognized Indian tribes which subsumes and governs all past and future land plans.

3.13 Natural Areas and Ecologically Significant Sites

3.13.1 Affected Environment

This section addresses natural areas that are on or within TVA lands, and within a 3-mile radius of the eight RLMPs. Natural areas include managed areas, ecologically significant sites, and Nationwide Rivers Inventory (NRI) streams. Managed areas include lands held in public ownership that are managed by an entity (e.g., TVA, National Park Service, U.S. Forest Service, state or county) to protect and maintain certain ecological and/or recreational features. A management plan or similar document defines what types of activities are compatible with the intended use of the managed area. Ecologically significant sites are tracts of privately owned land either that are recognized by regulatory biologists as having significant environmental resources or identified tracts on TVA lands that are ecologically significant but not specifically managed by TVA's Natural Areas Program. Although no management plan is likely to be in place for such sites, there may be an active effort to acquire this land for public ownership or otherwise provide protection for the sensitive resource, such as a conservation easement. NRI streams are free-flowing segments of rivers recognized by the National Park Service as possessing outstandingly remarkable natural or cultural values that may potentially qualify them as part of the National Wild and Scenic Rivers System.

Natural areas occurring on TVA lands include both TVA- and non-TVA managed areas. A review of the TVA Natural Heritage database indicated that 46 natural areas managed by the TVA Natural Areas Program are included within the eight RLMPS (Table 3-27). No TVA-managed natural areas are on Fort Loudoun or Great Falls reservoir. No NRI streams are located within 3 miles of the reservoirs or on or within TVA lands. An additional 135 natural areas either managed by other entities or recognized as ecologically significant are located on or within the eight RLMPs (see Appendix D, Tables D-19 through D-26). Natural areas within 3 miles of each of the eight reservoirs are listed in Table D-27 through D-34 of Appendix D.

Table 3-27. Natural Areas Managed by TVA on Reservoir Lands

Reservoir	Natural Area	Type	Acres
Chickamauga	Armstrong Bend	Habitat Protection Area	30.2
	Big Ridge	Small Wild Area	226.1
	Blythe Ferry	Habitat Protection Area	8.9
	Butcher Bluff	Habitat Protection Area	15.3
	Chickamauga Shoreline	Habitat Protection Area	54.3
	Chigger Point	Habitat Protection Area	15.3
	Eagle Roost	Habitat Protection Area	9.8
	Eaves Bluff	Habitat Protection Area	3.7
	Fairview Slopes	Habitat Protection Area	190.7
	Grasshopper Creek	Small Wild Area	202.1
	Johnson Bottoms	Habitat Protection Area	40.4
	Murphy Hill	Habitat Protection Area	195.6
	Possum Creek	Habitat Protection Area	78.3
	Soddy Creek	Habitat Protection Area	35.8
	Three B	Habitat Protection Area	45.4

Reservoir	Natural Area	Type	Acres
	Ware Branch	Habitat Protection Area	50.2
Kentucky	Alley Bluff	Habitat Protection Area	71
	Blood River	Habitat Protection Area	146.3
	Clendenin Creek	Habitat Protection Area	23.2
	Crooked Creek	Small Wild Area	50.4
	Henson Branch Rare Histosol Wetland	Habitat Protection Area	89.2
	Jennings Bluff Proposed	Habitat Protection Area	88.1
	Lady's Bluff	Small Wild Area	44.7
	Mccuiston Woods	Habitat Protection Area	51.2
	Paint Rock Bluff	Small Wild Area	68.4
	Panther Creek Swamp	Habitat Protection Area	144.2
	Tribble Woods	Habitat Protection Area	33.9
	Tupelo Gum Swamp	Habitat Protection Area	65.3
	Wilkinson Pond Slough	Habitat Protection Area	53.9
Nickajack	Huff Branch	Habitat Protection Area	20.6
	Little Cedar Mountain	Habitat Protection Area	319.2
	Marion Bridge	Habitat Protection Area	111.2
	Nickajack Cave	Habitat Protection Area, Small Wild Area, Wildlife Observation Area	401.9
	Nickajack Oak Wetland	Habitat Protection Area	47.9
	Raccoon Mountain Pump Storage	Wildlife Observation Area	646.8
	Shellmound Road Bluff	Habitat Protection Area	99.3
Normandy	Short Springs	Small Wild Area	71.3
Wheeler	Clark Bluff	Habitat Protection Area	20.4
	Clarksville Mountain	Habitat Protection Area	37.5
	Cotaco Creek	Small Wild Area	44
	English Ivy	Small Wild Area	20.5
	Long Oak Forest	Small Wild Area	100.8
	Muddy Bottoms	Habitat Protection Area	287.5
	Narrow Bluff	Habitat Protection Area	4.2
	Pryor Branch	Habitat Protection Area	7.9
Wilson	Old First Quarters	Small Wild Area	26.2

3.13.2 Environmental Consequences

Natural areas on are generally located on committed parcels allocated according to their prescribed land use to one of four land management zones: Zone 2 (Project Operations), Zone 3 (Sensitive Resource Management), Zone 4 (Natural Resource Conservation) and Zone 6 (Developed Recreation). Additionally committed parcels fronting natural areas that are situated on back-lying public lands are zoned according the use of the back-lying land and are allocated the appropriate land management zone. Natural areas situated on

property proposed for allocation to Zones 3 and 4 are managed for the protection and enhancement of resources and are not subject to adverse impacts; therefore properties located within these zones would remain “natural” and not be converted to other land uses, preserving the natural areas. Under both alternatives, between 77 and 81 percent of TVA land along the reservoirs is proposed for allocation to Zones 3 and 4; therefore, at minimum nearly three-fourths of TVA lands have management objectives that support and enhance the character of natural areas.

3.13.2.1 Alternative A – No Action Alternative

All natural areas are located on parcels that remain committed to their current use. No changes to the size, location, or character of natural areas are expected. However, under this alternative TVA would not take any action to align or complete plans of the TVA managed lands on the eight reservoirs. While natural areas in the vicinity of the eight reservoirs would not be adversely affected, management of these lands would not be consistent with other reservoirs in the TVA system. This would have a minor indirect impact as TVA would not adhere to a systematic process for management of these areas.

3.13.2.2 Alternative B – Proposed Land Use Plan Alternative

As the proposed zone allocations generally reflect the current land use and management practices, no major changes to the size, location, or character of natural areas are expected to result from the selection of Alternative B.

Overall, the efficient management and protection of TVA-designated natural areas and ecologically significant sites will benefit from the development and implementation of Alternative B as each RLMP provides a systematic process for identifying these areas and implementing management objectives for parcels which contain these sites.

3.14 Aesthetics and Visual Resources

3.14.1 Affected Environment

This section provides a review and classification of the visual attributes of existing scenery, along with the anticipated attributes resulting from the proposed action. The classification criteria used in this analysis are adapted from a scenic management system developed by the U.S. Forest Service and integrated with planning methods used by TVA (U.S. Forest Service 1995).

The visual landscape of an area is formed by physical, biological and man-made features that combine to influence both landscape identifiability and uniqueness. Scenic resources within a landscape are evaluated based on a number of factors that include scenic attractiveness, integrity and visibility. Scenic attractiveness is a measure of scenic quality based on human perceptions of intrinsic beauty as expressed in the forms, colors, textures and visual composition of each landscape. Scenic integrity is a measure of scenic importance based on the degree of visual unity and wholeness of the natural landscape character. The varied combinations of natural features and human alterations both shape landscape character and help define their scenic importance. The subjective perceptions of a landscape’s aesthetic quality and sense of place is dependent on where and how it is viewed.

Scenic visibility of a landscape may be described in terms of three distance contexts: (1) foreground, (2) middleground and (3) background. In the foreground, an area within 0.5 mile of the observer, individual details of specific objects are important and easily

distinguished. In the middleground, from 0.5 to 4 miles from the observer, object characteristics are distinguishable but their details are weak and they tend to merge into larger patterns. In the distant part of the landscape, the background, details and colors of objects are not normally discernible unless they are especially large, standing alone, or have a substantial color contrast. In this review, the background is measured as 4 to 10 miles from the observer. Visual and aesthetic impacts associated with a particular action may occur as a result of the introduction of a feature that is not consistent with the existing viewshed. Consequently, the character of an existing site is an important factor in evaluating potential visual impacts.

The reservoirs within the eight RLMPs include a variety of landscapes and natural features, including rivers, floodplains, islands, wetlands, and forests. Since the scenic features of the landscape within the reservoirs are not limited by parcel boundaries, the aesthetics of the landscape extend across public and private land alike and combine with the adjacent land uses including residential development, public parks, and sporadic industrial features. The reservoirs offer abundant water-recreation opportunities, therefore the view of the landscape from on the water is important and can vary widely. Most creek embayments are broadly open at the mouth, while some wind over a mile to their headwaters.

Among the scenic resources of each of the reservoirs, the water body itself is the most distinct and outstanding aesthetic feature. The horizontal surface provides visual balance and contrast to the islands and wooded hillsides. The reservoirs weave around ridges and bends, changing views periodically seen from the water. The reservoirs also link the other landscape features together. To most observers, views across the water are generally satisfying and peaceful.

Islands are other significant features that are common to most of the eight reservoirs. These islands typically provide scenic accents and visual reference points throughout the reservoirs and commonly serve as visual buffers for less desirable views. They may also provide a pleasing foreground frame for the distant shoreline or background.

Other important scenic features include the secluded coves and steep, wooded ridges that occur around the reservoirs. The isolated coves with wooded shoreline provide relatively private locations for dispersed recreation activities. Significant elevation changes along some stretches of shoreline provide a dramatic contrast to the surrounding reservoir and gently sloping countryside, particularly when they are viewed from background distances.

Most shorelines upstream of the dams appear natural. Slopes and ridgelines seen from the reservoirs are generally heavily vegetated with mature hardwood and evergreen trees and provide positive visual contrast to the reservoirs. On most of the eight reservoirs, there is usually little development in the foreground distances.

Various combinations of development and land use patterns that are present in the viewed landscapes along the shorelines of the eight reservoirs contribute to the overall visual character of the project area. These can range from the more urban and industrial developments often associated with the mainstem reservoirs to residential developments that are common to both mainstem and tributary reservoirs. Urban and industrial developments generally create a lower level of scenic integrity. Residential areas and water-related facilities that include docks, boathouses, stairways, and shoreline protection structures are becoming more common. The presence of these facilities in the landscape reduces scenic integrity.

TVA's dam structures contrast visually with the lands that border them. The structures appear predominately industrial near the dams and associated features. Most buildings are broadly horizontal and can be seen in the foreground. Transmission structures, including towers and lines, and fossil and nuclear plant structures generally can be seen up to middle-ground distances, depending on topography and viewer position. Farther away, closer to the borders on all sides, the landscape becomes natural appearing with slight human alterations. Residents and motorists along local roads have views up to middle-ground distances of the dam, depending on seasonal variations of vegetation and atmospheric conditions.

3.14.2 Environmental Consequences

The scenic value or quality of visual resources commonly is based on human perceptions of intrinsic beauty as expressed in the forms, colors, textures, and visual composition seen in each landscape. Human perceptions of shoreline development no doubt varies widely among users and recreationists depending on their preferences and expectations. The assessment of scenic quality is often evaluated using scenic attractiveness (e.g., outstanding natural features, scenic variety, seasonal change, and strategic location), scenic integrity (e.g., visual unity and wholeness of the natural landscape character), human sensitivity (e.g., the expressed concern of people for the scenic qualities of the project area derived or confirmed by public input), and viewing distance (i.e., how far an area can be seen by observers and the degree of visible detail). The impacts of the alternatives on visual resources were qualitatively evaluated considering the scenic quality characteristics described above. These measures help identify changes in visual character based on commonly held perceptions of landscape beauty and the aesthetic sense of place. Scenic Value Class is determined by combining the levels of scenic attractiveness, scenic integrity, and visibility.

The scenic character of wildlife management areas, islands, and wetlands would be preserved under both alternatives. This would preserve the scenic accent, attractive contrast, and visual richness these resources contribute to reservoir vistas. Several areas of the reservoirs would benefit as major sections of the riverine upper reservoirs would be protected or screened from further development. This would preserve the variety of natural features including the river, forest-covered mountainside along the banks, linear channel islands, and ridge landforms. The combined contributions of these attractive features would help sustain the scenic landscape character and aesthetically pleasing sense of place.

The size of the eight reservoirs and the amount of TVA-managed land on each of the reservoirs vary greatly. Where TVA lands represent a small portion of the reservoir's overall shoreline (e.g., Fort Loudoun and Wilson reservoirs), the effects of TVA management of its lands on the overall visual character of the reservoir is generally very limited. Conversely, where TVA lands make up a large portion of the reservoir's shoreline (Kentucky and Wheeler reservoirs), TVA land management decisions may greatly influence the scenic character of the reservoir.

Lands having the greatest scenic qualities are often the most desirable for public preservation. Frequently, however, they are also the most sought-after for commercial and residential development. Under both alternatives, TVA would continue to conduct environmental reviews, including evaluation for potential visual impacts, prior to the approval of any proposed development on public land. These reviews may prevent the most serious scenic disruptions or loss of visual resources by requiring mitigation measures to reduce potentially significant visual impacts.

3.14.2.1 Alternative A – No Action Alternative

Under the No Action Alternative, the allocation of selected lands based upon visual resource conservation concerns would continue to be based on the current RLMPs for each reservoir. However, these RLMPs may not fully incorporate the current aesthetic resources within the reservoirs. Where TVA has custody of the land, actions of TVA and others would be evaluated to determine potential visual effects prior to land use approval, thereby preventing serious visual disruptions or loss of scenic resources. Approval of some activities may also require avoidance or mitigation measures that reduce visual impacts, for example in the case of neighboring historic properties. Activities could also occur on lands adjacent to those owned by TVA that could change the aesthetic quality within the reservoir. There are no known county or local ordinances to protect aesthetics near the reservoirs.

Adoption of Alternative A would likely result in some minor long-term negative impacts, which include gradual losses of visual resources, scenic attractiveness, and undeveloped areas, as well as negative changes in the aesthetic sense of place. As a result, scenic integrity may decrease slightly as patchy development spreads within views from the reservoirs.

3.14.2.2 Alternative B – Proposed Land Use Plan Alternative

Under Alternative B, the eight RLMPs would enhance conservation and protection of scenic resources as scenic values were considered during the allocation process. Parcels having distinctive and valuable visual characteristics such as islands, rock bluffs, steep and wooded ridges, wetlands, and flowing shallow water areas were typically allocated to either Zone 3 (Sensitive Resource Management) or Zone 4 (Natural Resource Conservation), and thus, are unlikely to be disturbed under Alternative B. These Zone 3 and 4 lands typically provide valuable protective screening and important scenic buffers.

However, under this alternative, there would be an overall increase in acreage allocated to Zones 2, 5, 6, and 7 (Project Operations, Industrial, Developed Recreation, and Shoreline Access). During the parcel allocation process, the scenic values in each parcel were taken into consideration. Therefore, while activities on parcels allocated to Zones 2, 5, 6, and 7 have the greatest potential to decrease aesthetics value, these parcels likely have the lowest scenic value so any change would be minor. Additionally, the majority (77.3 percent) would still be allocated to Zones 3 and 4 and be protective of aesthetic resources.

Activities that involve minor, temporary visible changes, such as recreational hiking, picnicking, bank fishing, and some selective forest management, could take place on lands allocated to Zone 3 and 4 (Sensitive Resource Management and Natural Resource Conservation). Some development with more visible modifications could take place on land allocated to Zone 4 as long as the location and appearance were subordinate to maintaining the desired visual characteristics. Management and protection of the scenic landscape character would provide direction for any land use decisions affecting these parcels. Visual impacts would also be considered in decisions affecting the use of parcels allocated to one of the other proposed land management zones.

Adoption of Alternative B would likely have an increasingly beneficial impact over time as the scenic values of the parcels were considered during the allocation process. The eight RLMPs would provide for protection of scenic resources and preservation of natural areas, as development grows around the reservoirs. Scenic integrity would remain moderate or higher in selected areas. Consequently, implementation of Alternative B would provide

important protective management of visual resources, which would help preserve the aesthetic sense of place and scenic landscape character of the reservoirs.

3.15 Noise

3.15.1 Affected Environment

Noise is generally defined as unwanted sound that disrupts normal activities or that diminishes the quality of the environment. It is usually caused by human activity that adds to the natural acoustic setting of a locale. Various descriptors are used to describe sound and noise levels. These include the A-weighted decibel scale (dBA); sound level equivalents (Leq), day-night average sound levels (Ldn), and percentile levels.

The most common measurement of sound and environmental noise is the A-weighted decibel scale (dBA). This is a logarithmic scale that ranges from 0 dBA to about 140 dBA and approximates the range of human hearing. The threshold of human hearing is about 0 dBA; less than 30 dBA is very quiet; 30 to 60 dBA is quiet; 60 to 90 dBA is moderately loud; 90 to 110 dBA is very loud; and 110 to 130 is uncomfortably loud. A 10-decibel increase in sound levels is perceived as a doubling of the loudness.

To account for sound fluctuations, environmental noise is commonly described in terms of the equivalent sound level, or Leq. The Leq value, expressed in dBA, is the energy-averaged, A-weighted sound level for the time period of interest. The day-night sound level (Ldn), is the 24-hr equivalent sound level, which incorporates a 10-dBA correction penalty for the hours between 10 p.m. and 7 a.m., to account for the increased sensitivity of people to sounds that occur at night.

The perceived loudness or intensity between a noise source and a receptor may change as a result of distance, topography, vegetation, water bodies, and structures. The closer a receptor is to a noise source the louder the noise seems; for every doubling of distance from a source the intensity drops by about 6 dBA over land and about 5 dBA over water. Topography, vegetation, and structures can change noise intensity through reflection, absorption, or deflection. Reflection tends to increase the intensity, while absorption and deflection tend to decrease the intensity.

Sources of noise along each of the eight reservoirs include industrial development, power generation facilities, substations, developed recreation sites, recreational watercraft use, navigation uses and automobile traffic. Lands allocated to Zone 5 (Industrial) have the greatest potential to support uses that produce higher levels of noise. Noise emission levels from sources that would be allocated to Zone 2 (Project Operations) can range from 70 dBA to 100 dBA (USDOI 2008). These sources include power generation, navigation locks and associated barge operations. Noise from generators at TVA facilities produce a constant, low frequency drone during generation. However because they are housed in buildings, they are not audible at a distance. Noise that occurs from barge traffic and when water is released would approach 100 dBA, but would be intermittent and would attenuate with distance. Normandy Reservoir was impounded for water supply, flood control, and recreational development and is not a hydroelectric facility. Therefore, noise emissions from land allocated to Zone 2 at this reservoir would be relatively low.

Noise emissions associated with land uses allocated to Zone 6 (Developed Recreation) depend on the location of the facilities and the type and intensity of recreational use. For example, recreational facilities that support low-intensity uses, such as parks or open

spaces, generate less noise than more intensive uses such as marinas and developed recreation areas. Noise levels and patterns at developed recreation areas are typical of campground and day use recreation areas. These developed recreational use areas could be compared to residential areas with an Ldn range of about 50 dBA (quiet suburb, not close to major roads, and little nighttime activity) to about 65 dBA (relatively noisy residential area). The most conspicuous recreational noise producers are power boats and personal water craft (jet skis) on the reservoir. While power boats and jet skis may both have an average sound level of about 90 dBA, noise emissions from these sources can exceed 115 dBA depending on speed and other operational factors. A list of common indoor and outdoor noise levels is presented in Table 3-28.

The Noise Control Act of 1972, along with its subsequent amendments (Quiet Communities Act of 1978, USC 42 4901–4918), delegates authority to the states to regulate environmental noise and directs government agencies to comply with local community noise statutes and regulations. Many local noise ordinances are qualitative, such as prohibiting excessive noise or noise that results in a public nuisance. Because of the subjective nature of such ordinances, they are often difficult to enforce.

There is considerable variation in individual response to noise. Noise that one person would consider mildly annoying, another person may consider highly annoying or not annoying at all. The USEPA noise guideline recommends an Ldn of 55 dBA, which is sufficient to protect the public from the effect of broadband environmental noise in typical outdoor and residential areas. These levels are not regulatory goals but are “intentionally conservative to protect the most sensitive portion of the American population” with “an additional margin of safety” (USEPA 1974). The U.S. Department of Housing and Urban Development (HUD) considers an Ldn of 65 dBA or less to be compatible with residential areas (HUD 1985).

3.15.2 Environmental Consequences

Noise-related effects of land planning on the eight reservoirs were evaluated qualitatively based on the number of acres allocated to each zone and based on the assumptions that the potential to generate noise emissions is greatest with lands allocated to Zone 5 and Zone 2 (Industrial and Project Operations respectively) and moderate with land allocated to Zone 6 (Developed Recreation). Land allocated to Zone 4 (Natural Resource Conservation) Zone 3 (Sensitive Resource Management) and Zone 7 (Shoreline Access) would have the least potential to generate noise emissions.

Table 3-28. Comparison of Common Sound Levels

Source(s)	Sound Levels[2] (dBA)	Notes
Shotgun, rifle, handgun, fireworks (at 3 feet)	> 160	Impulse sounds
Jet engine (taking off), artillery fire (at 500 ft)	150	
Airplane (taking off)	140	Harmfully loud
Stock car races, jet takeoff (at 100-200 ft)	130	Threshold of pain
Power plant machinery (near source), chainsaw, jet plane (at ramp), Band concert	120	Threshold of sensation or feeling
Car horn, symphony concert, baby crying	110	Regular exposure of more than 1 minute risks permanent hearing loss. Physical discomfort. Maximum vocal effort.
Snowmobile. garbage truck, jet takeoff (at 2,000 feet), school dance	100	> 95 dBA – no more than 15 minutes/day unprotected exposure recommended. 1 hour per day risks hearing loss.
Heavy truck (at 50 feet), motorcycle (operator), power lawnmower, jet ski, pleasure motorboat, shouted conversation	90	Very annoying.
Heavy traffic, many industrial work places, electric razor	85	Level at which hearing damage begins with 8-hour exposure.
Ringing telephone, average city noise, freight train (at 50 feet)	80	Annoying; interferes with conversation
Freeway traffic (at 50 feet), urban housing on major avenue (Ldn), inside a car, TV audio	70	Interferes with telephone conversation. EPA Ldn for lifetime exposure without hearing loss.
Normal conversation, sewing machine	60	Intrusive. Interference with human speech begins at about 60 dBA.
Rainfall, refrigerator, wooded residential (Ldn), light auto traffic (at 100 feet)	50	Quiet. Comfortable. Sleep disturbance may occur at less than 50 dBA.
Quiet office, library, quiet residential area, rural residential (Ldn)	40	
Soft whisper (at 15 feet)	30	Very quiet.
Normal breathing	10	Just audible.
	0	Threshold of hearing.

Source: USDOI 2008

[1] These are typical levels and some may be approximate averages of ranges; actual levels may depend on several factors, including distance from the sound source.

3.15.2.1 Alternative A – No Action Alternative

As shown on Table 2-1, land allocated to Zone 5 (Industrial) ranges from a low of 0 acres to approximately 1,250 acres which represents 0 percent to a high of 2.4 percent of land around each reservoir. Noise emissions from existing industrial sources would not change and potential future industrial development would be limited to the following:

- Two parcels on Chickamauga Reservoir totaling 3.4 acres;
- Two parcels on Fort Loudoun Reservoir totaling 7.1 acres;
- Eleven parcels on Kentucky Reservoir totaling 463.4 acres; and
- One parcel on Wheeler Reservoir totaling 91.3 acres.

Potential noise impacts from industrial development would depend on the type of industry that might locate on these parcels. However, given the relatively small amount of land that would be allocated to Zone 5 (Industrial), this impact would be minor.

The percentage of land allocated to Zone 2 (Project Operations) ranges from a low of 1.1 percent at Kentucky Reservoir to a high of 87.6 percent at Wilson Reservoir. At Fort Loudoun Reservoir, 27.8 percent of the land is allocated to Zone 2. Overall, 6.7 percent of TVA land on the eight reservoirs would be allocated to Zone 2. As these allocations generally reflect the current conditions, there would be no major change to the current noise environment.

The percentage of land allocated to Zone 6 (Developed Recreation), ranges from 2.5 percent at Nickajack to 94.8 percent at Great Falls. Overall, 5.8 percent of the TVA land on the eight reservoirs would be allocated to Zone 6. Given the relatively small percent of land that would be allocated to this zone and the nature of the noise emissions from activities related to developed recreation, this impact would be negligible.

3.15.2.2 Alternative B – Proposed Land Use Plan Alternative

Although the amount of land allocated to Zone 5 under Alternative B would be slightly higher (less than one percent) than Alternative A, the percentage of land designated as Zone 5 (Industrial) is relatively low (2.4 percent). Specifically, industrial land use or potential industrial development on the eight RLMPs is currently limited to the following:

- One parcel on Fort Loudoun Reservoir totaling 3.5 acres;
- Six parcels on Kentucky Reservoir totaling 1,024.9 acres; and
- Four parcels on Wheeler Reservoir totaling 446.2 acres.

At Kentucky Reservoir, there are 1,024.9 acres of land that could be considered for future industrial development. Most of this acreage is made up of two parcels: Parcel 97 and Parcel 139. Parcel 97 is a 571-acre noncontiguous tract of land, of which 191.4 acres could be considered for future industrial development. Parcel 97 consists of a large noncontiguous tract of land lying along the right descending bank between Tennessee River Miles 100.6 and 104.0. Approximately 85 acres of this tract is encumbered with transmission lines or other pipeline rights of way. A portion of this parcel also fronts the Humphrey County, Tennessee, industrial site, and the previous Vanguard Services industrial site. A review of the surrounding land uses indicates that there could be some minor noise impacts to residential receptors just east of Parcel 97. However, given the current industrial use in the vicinity of this parcel, and the attenuating effects of topography, vegetation and structures, the impacts to noise sensitive receptors (residences, etc.) associated with future industrial development on Parcel 97 would be minor.

Parcel 139 is a 701.4-acre tract of land, all of which could be considered for future industrial development. Although the parcel remains in a forested state, the back-lying property has been cleared for timber. A review of the surrounding land uses indicates sparse residential development east of the parcel. There are some residences on the west bank of the Tennessee River (Fishers Landing); however, these residences lie approximately one-half mile from the tract and any noise generated by future industrial development would likely attenuate to acceptable levels for residential land uses. Therefore, there would be a very minor increase in the potential for impacts to noise sensitive receptors (residences, etc.) associated with future industrial development on Parcel 139.

The percentage of land designated Zone 2 ranges from a low of 1.7 percent at Kentucky Reservoir to a high of 87.6 percent at Wilson Reservoir. Overall 7.8 percent of the eight RLMPs would be allocated to Zone 2.

A large percentage of TVA land is allocated to Zone 6 (Developed Recreation) at Great Falls Reservoir, and Fort Loudoun Reservoir which generally reflect existing uses and conditions. Land allocated to developed recreation at the remaining reservoirs are all at or below 12 percent. Overall, only 7 percent of the land would be allocated to Zone 6 in the eight RLMPs.

The amount of land allocated to Zone 2 (Project Operations) and Zone 5 (Industrial) would increase by 1.1 and less than 1 percent respectively under this alternative and the land allocated to Zone 6 (Developed Recreation) would increase by 1.2 percent. Although there would be in increase in the overall amount of land allocated to zones which have the potential for notable noise emissions, based on the proportion of land in the eight RLMPs available for development relative to the entire shoreline of the eight reservoirs, there would be a minor increase in the potential for noise impacts associated with Alternative B relative to Alternative A.

3.16 Socioeconomics and Environmental Justice

The important overall socioeconomic conditions that could potentially be affected by the development of the eight RLMPs include population, size of the labor force, types of jobs, unemployment levels, and income levels. Socioeconomic conditions were analyzed at the county level for the counties in which the reservoirs are located and for the states in which they lie. The purpose of the socioeconomics analysis is to identify the potential effects of the alternatives on the economy and socioeconomic groups. In addition, an environmental justice analysis was performed consistent with EO 12989.

EO 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” formally requires Federal agencies to incorporate Environmental Justice as part of NEPA. Specifically, it directs them to address, as appropriate, any disproportionately high and adverse human health or environmental effects of their actions, programs, or policies on minority and low-income populations. Although TVA is not one of the agencies subject to this order, TVA routinely considers Environmental Justice impacts as part of the project decision-making process.

3.16.1 Affected Environment

3.16.1.1 Population and Economy

Population varies greatly among the counties in the eight RLMPs. Population in the 36 counties that include the reservoirs is estimated to be about 2,513,709 (Table 3-29). In 10 of the 36 counties in the area, population grew more quickly than in their respective state between 2010 and 2015, while 16 counties decreased in total population. The remaining 10 counties increased in total population, but at rate slower than their respective state. Projections and current trends suggest that the population within the area will increase by 6.9 percent to about 2,687,684 by the year 2020. The area is projected to grow more quickly than the nation, with an estimated growth rate of 5 percent from 2014 to 2020. Overall, the rural population share in the counties where the reservoirs are located far exceeds the Tennessee, Kentucky, and Alabama state averages, which are higher than the national average.

The total employed population between 2010 and 2014 was 1,081,049 in the area counties (Table 3-30). During this period, Management, Business Science, and Arts accounted for the largest share of civilian employment at nearly 35 percent within the area counties as well as within each of the states. The unemployment rate for the area counties during the same years was 5.8 percent. The only state with a lower unemployment rate than the area counties was Kentucky at 5.5 percent. The highest unemployment rate, 8.8 percent, was in Meigs County, followed by Benton County at 7.6 percent. Trigg County had the lowest unemployment rate at 3.9 percent.

The eight reservoirs are located in a relatively low-income area (Table 3-30). During the 2010 to 2014 period, the median household income average for all of the counties was $40,829. Median household income in Alabama, Kentucky, and Tennessee ranges from $43,000 to $45,000, which was lower than the national average of $53,482. Twenty-four of the 36 counties in the area had median household incomes below the state. Wayne County was the poorest county, with a median household income of $31,225.

Providing accessible natural resources and recreational opportunities for the people of the Tennessee Valley is a key component of the TVA stewardship mission. Management of TVA land for recreational use as well as for preservation of cultural and natural resources contributes to the local economy through promotion of tourism. TVA reservoirs and the land surrounding them support a variety of recreational activities including camping, hiking, fishing, swimming and boating. These opportunities attract millions of visitors each year (TVA 2016a) which has positive direct and indirect impact on the local economies around the reservoirs. Positive direct impacts include expenditures at marinas, hotels and other businesses. Indirect impacts of tourism affect most sectors of the economy including secondary sales, income and employment within the region.

3.16.1.2 Environmental Justice

The population of the counties where the reservoirs are located is predominantly white, with a minority population average of 18.6 percent (Table 3-31). The minority population share ranges from 3.6 percent in Livingston County, Kentucky to 33.8 percent in Madison County, Alabama. Madison County, Alabama is the only county within the area that has a higher minority population share than its respective state.

Table 3-29. Population Characteristics

Counties	Population (2015 Estimate)	Population (2014 Estimate)	Population (2010)	Percent Change (2010-2015)	Percent Change (2010-2014)	Population Projection 2020	Projected Growth (2015-2020)	Percent Rural (2010)
Bedford, TN	47,183	45,660	45,058	4.7%	1.3%	49,664	5.3%	55.6%
Benton, TN	16,129	16,345	16,489	-2.2%	-0.9%	20,542	27.4%	78.5%
Blount, TN	127,253	124,435	123,010	3.4%	1.2%	136,357	7.2%	32.6%
Bradley, TN	104,091	101,004	98,963	5.2%	2.1%	121,533	16.8%	33.0%
Calloway, KY	38,343	37,981	37,191	3.1%	2.1%	40,411	5.4%	48.7%
Carroll, TN	27,910	28,511	28,522	-2.1%	0.0%	35,753	28.1%	83.1%
Coffee, TN	54,277	53,151	52,796	2.8%	0.7%	59,888	10.3%	47.3%
Colbert, AL	54,354	54,491	54,428	-0.1%	0.1%	54,021	-0.6%	43.9%
Decatur, TN	11,660	11,675	11,757	-0.8%	-0.7%	14,577	25.0%	100.0%
Hamilton, TN	354,098	344,772	336,463	5.2%	2.5%	344,951	-2.6%	10.0%
Hardin, TN	25,756	25,969	26,026	-1.0%	-0.2%	29,604	14.9%	67.9%
Henderson, TN	28,015	27,963	27,769	0.9%	0.7%	33,034	17.9%	76.4%
Henry, TN	32,147	32,279	32,330	-0.6%	-0.2%	38,947	21.2%	66.9%
Houston, TN	8,149	8,356	8,426	-3.3%	-0.8%	10,563	29.6%	100.0%
Humphreys, TN	18,135	18,322	18,538	-2.2%	-1.2%	20,000	10.3%	82.5%
Knox, TN	451,324	440,732	432,226	4.4%	2.0%	481,842	6.8%	10.9%
Lauderdale, AL	92,596	92,780	92,709	-0.1%	0.1%	92,221	-0.4%	49.3%
Lawrence, AL	33,115	33,835	34,339	-3.6%	-1.5%	32,432	-2.1%	91.3%
Limestone, AL	91,663	87,167	82,782	10.7%	5.3%	99,775	8.8%	57.6%
Livingston, KY	9,316	9,443	9,519	-2.1%	-0.8%	9,438	1.3%	95.4%
Loudon, TN	51,130	49,749	48,556	5.3%	2.5%	58,729	14.9%	40.6%
Lyon, KY	8,306	8,415	8,314	-0.1%	1.2%	8,523	2.6%	100.0%
Madison, AL	353,089	343,229	334,811	5.5%	2.5%	372,447	5.5%	16.4%

Counties	Population (2015 Estimate)	Population (2014 Estimate)	Population (2010)	Percent Change (2010-2015)	Percent Change (2010-2014)	Population Projection 2020	Projected Growth (2015-2020)	Percent Rural (2010)
Marion, TN	28,487	28,261	28,237	0.9%	0.1%	33,845	18.8%	77.0%
Marshall, AL	94,725	94,121	93,019	1.8%	1.2%	95,958	1.3%	53.3%
McMinn, TN	52,639	52,409	52,266	0.7%	0.3%	57,155	8.6%	60.3%
Meigs, TN	11,830	11,694	11,753	0.7%	-0.5%	19,040	60.9%	100.0%
Morgan, AL	119,565	119,744	119,490	0.1%	0.2%	119,233	-0.3%	38.6%
Perry, TN	7,929	7,851	7,915	0.2%	-0.8%	9,260	16.8%	100.0%
Polk, TN	16,773	16,715	16,825	-0.3%	-0.7%	22,086	31.7%	100.0%
Rhea, TN	32,526	32,272	31,809	2.3%	1.5%	37,665	15.8%	68.0%
Stewart, TN	13,259	13,311	13,324	-0.5%	-0.1%	15,659	18.1%	100.0%
Trigg, KY	14,233	14,277	14,339	-0.7%	-0.4%	16,244	14.1%	79.4%
Warren, TN	40,435	39,867	39,839	1.5%	0.1%	50,056	23.8%	61.4%
Wayne, TN	16,748	16,967	17,021	-1.6%	-0.3%	18,046	7.8%	100.0%
White, TN	26,521	26,086	25,841	2.6%	0.9%	28,185	6.3%	78.2%
Total	**2,513,709**	**2,469,839**	**2,432,700**	**1.1%**	**0.5%**	**2,687,684**	**13.3%**	**66.8%**
Tennessee	6,600,299	6,451,365	6,346,105	3.9%	1.6%	7,195,375	8.3%	33.6%
Kentucky	4,425,092	4,383,272	4,339,367	1.9%	1.0%	4,672,754	5.3%	41.6%
Alabama	4,858,979	4,817,678	4,779,736	1.6%	0.8%	4,958,548	2.0%	41.0%
United States	321,418,820	318,907,401	308,758,105	4.1%	3.2%	334,503,000	4.1%	8.9%

Table 3-30. Economic Characteristics

Location	Civilian Employed Population 16 Years and Over	Management and Business Science and Arts	Service Occupations	Sales and Office	Natural Resources, Construction, and Maintenance	Production, Transportation and Material Moving	Population > 16 years Unemployed	Percent of Population > 16 years Unemployed	Median Household Income	Percent of Population Below Poverty Level
Bedford, TN	19,032	4,886	2,776	4,250	2,751	4,369	1,774	5.1%	$40,989	21.1%
Benton, TN	6,068	1,382	1,221	1,254	794	1,417	1,027	7.6%	$34,087	21.8%
Blount, TN	54,795	17,668	9,644	14,009	5,711	7,763	5,450	5.4%	$46,518	14.4%
Bradley, TN	43,193	12,345	7,565	10,966	4,188	8,129	5,453	6.8%	$41,575	19.8%
Calloway, KY	16,855	5,610	3,097	4,168	1,571	2,409	1,989	6.2%	$38,589	21.3%
Carroll, TN	10,984	3,298	1,920	2,407	1,023	2,336	1,404	6.1%	$36,168	19.4%
Coffee, TN	21,217	6,755	3,495	4,979	1,752	4,236	2,599	6.2%	$39,656	21.3%
Colbert, AL	21,271	5,682	3,265	5,481	2,386	4,457	2,356	5.0%	$39,914	18.3%
Decatur, TN	4,569	1,359	896	886	529	899	550	6.0%	$37,219	21.8%
Hamilton, TN	161,007	60,062	27,458	40,843	12,169	20,475	15,737	5.6%	$47,880	16.0%
Hardin, TN	9,216	2,238	1,694	2,127	1,189	1,968	1,817	8.6%	$34,084	22.2%
Henderson, TN	11,119	3,007	1,629	2,499	1,326	2,658	1,379	6.3%	$38,696	20.7%
Henry, TN	12,368	3,191	2,129	3,090	1,315	2,643	1,792	6.9%	$38,694	19.8%
Houston, TN	3,063	635	500	572	667	689	278	4.2%	$38,637	21.8%
Humphreys, TN	7,227	1,980	1,175	1,405	1,055	1,612	899	6.1%	$41,152	16.4%
Knox, TN	211,194	84,478	34,725	56,122	15,523	20,346	15,723	4.4%	$47,543	15.3%
Lauderdale, AL	40,047	11,994	7,795	9,878	4,502	5,878	3,444	4.6%	$42,703	18.7%
Lawrence, AL	12,876	3,124	2,053	2,537	1,910	3,162	1,657	6.1%	$40,356	17.1%
Limestone, AL	36,895	12,831	5,489	8,257	4,223	6,086	3,384	4.9%	$49,461	14.1%
Livingston, KY	3,776	767	742	730	833	704	325	4.2%	$40,580	15.4%
Loudon, TN	19,811	6,162	3,344	4,612	2,233	3,460	2,346	5.7%	$60,062	15.7%

Location	Civilian Employed Population 16 Years and Over	Management and Business Science and Arts	Service Occupations	Sales and Office	Natural Resources, Construction, and Maintenance	Production, Transportation and Material Moving	Population > 16 years Unemployed	Percent of Population > 16 years Unemployed	Median Household Income	Percent of Population Below Poverty Level
Lyon. LU	2,721	684	608	674	282	473	232	3.1%	$43,715	13.9%
Madison, AL	162,126	72,134	24,787	37,642	10,797	16,766	17,171	6.3%	$58,203	13.4%
Marion, TN	11,505	3,056	1,527	2,842	1,442	2,638	1,011	4.4%	$40,998	20.3%
Marshall, AL	37,953	10,733	5,612	8,388	5,222	7,998	3,965	5.4%	$39,473	19.9%
McMinn, TN	20,860	5,545	3,111	4,408	2,346	5,450	2,344	5.5%	$39,644	18.5%
Meigs, TN	3,766	672	591	707	663	1,133	834	8.8%	$33,061	21.9%
Morgan, AL	52,294	14,968	8,548	12,538	6,146	10,094	6,363	7.0%	$45,341	15.1%
Perry, TN	2,764	703	698	418	441	504	385	6.1%	$31,750	23.6%
Polk, TN	6,343	1,512	1,100	1,608	726	1,397	878	6.5%	$39,434	18.9%
Rhea, TN	12,371	3,054	2,045	2,369	1,612	3,291	1,715	6.7%	$37,512	23.0%
Stewart, TN	4,863	1,530	818	994	733	788	727	6.8%	$41,089	19.1%
Trigg, LU	5,461	1,828	719	1,328	437	1,149	444	3.9%	$45,303	15.5%
Warren, TN	15,870	4,130	2,520	3,475	1,897	3,848	1,457	4.6%	$34,592	21.5%
Wayne, TN	5,662	1,334	1,049	1,351	875	1,053	975	6.9%	$31,225	21.3%
White, TN	9,907	2,309	1,861	2,049	1,274	2,414	1,279	6.1%	$33,933	22.1%
Total	**1,081,049**	**373,646**	**178,206**	**261,863**	**102,543**	**164,692**	**111,163**	**5.8%**	**$40,829**	**18.9%**
Tennessee	2,835,895	952,162	482,800	713,960	254,514	432,459	296,819	5.8%	$44,621	17.8%
Kentucky	1,870,879	612,516	313,627	452,063	181,594	311,079	192,877	5.5%	$43,342	18.9%
Alabama	2,010,453	661,335	339,569	489,899	203,989	315,661	228,716	6.0%	$43,511	18.9%
United States	143,435,233	52,234,574	26,053,338	34,935,133	12,875,934	17,336,254	14,504,781	10.1%	$53,482	15.6%

Source: USCB 2010-2014 American Community Survey, 5- year estimates

Table 3-31. Racial Characteristics

Counties	White Alone*	Black or African American Alone*	American Indian and Alaska Native Alone*	Asian Alone*	Native Hawaiian and Other Pacific Islander Alone*	Two or More Races	Hispanic or Latino†	Percent Minority
Bedford, TN	38,954	2,810	366	363	0	1,615	5,234	22.8%
Benton, TN	15,603	581	28	51	0	65	330	6.5%
Blount, TN	117,279	3,658	511	998	8	1,588	3,618	8.3%
Bradley, TN	92,821	4,551	164	993	184	1,716	5,189	12.7%
Calloway. KY	34,755	1,474	120	800	9	683	942	10.6%
Carroll, TN	24,726	2,851	129	52	2	566	644	14.9%
Coffee, TN	48,384	1,151	194	563	3	1,010	2,063	9.4%
Colbert, AL	43,356	8,712	360	190	38	1,091	1,276	21.4%
Decatur, TN	11,002	335	2	28	5	179	335	7.6%
Hamilton, TN	258,373	68,961	639	6,617	151	5,838	4,807	25.2%
Hardin, TN	21,140	1,160	86	100	16	432	236	7.8%
Henderson, TN	24,923	2,154	9	25	20	232	592	10.8%
Henry, TN	28,883	2,774	83	24	0	489	653	12.5%
Houston, TN	7,911	167	16	14	0	231	166	7.1%
Humphreys, TN	17,449	711	20	28	5	61	333	6.3%
Knox, TN	377,816	40,328	1,150	8,868	140	8,489	16,252	17.1%
Lauderdale, AL	80,695	9,228	436	743	194	1,433	2,174	15.3%
Lawrence, AL	26,344	3,751	1,845	40	0	1,802	663	23.9%
Limestone, AL	70,843	11,133	527	1,089	33	1,673	4,934	22.2%
Livingston, KY	9,235	29	18	35	0	121	136	3.6%
Loudon, TN	47,763	617	89	377	23	652	3,712	11.0%
Lyon, KY	7,749	543	0	31	0	80	70	8.6%

Counties	White Alone*	Black or African American Alone*	American Indian and Alaska Native Alone*	Asian Alone*	Native Hawaiian and Other Pacific Islander Alone*	Two or More Races	Hispanic or Latino†	Percent Minority
Madison, AL	236,921	82,307	2,244	8,415	330	9,958	15,984	34.7%
Marion, TN	26,432	458	49	70	0	1,142	417	7.6%
Marshall, AL	87,082	1,703	632	512	7	1,594	11,830	17.3%
McMinn, TN	48,498	2,106	127	266	0	1,086	1,616	9.9%
Meigs, TN	11,400	126	3	0	0	294	144	4.8%
Morgan, AL	99,065	14,413	915	746	83	2,641	9,304	23.5%
Perry, TN	7,474	198	23	0	0	156	152	6.7%
Polk, TN	16,259	30	104	28	0	256	273	4.1%
Rhea, TN	30,485	703	51	23	0	673	1,333	8.6%
Stewart, TN	12,504	257	164	139	0	162	297	7.7%
Trigg, KY	12,819	1,172	0	80	0	206	213	11.7%
Warren, TN	36,539	638	76	224	12	1,315	3,275	13.9%
Wayne, TN	15,633	1,041	36	40	0	141	292	9.1%
White, TN	25,002	469	25	10	0	563	497	6.0%
Total	**2,072,117**	**273,300**	**11,241**	**32,582**	**1263**	**50,233**	**99,986**	**18.6%**
Tennessee	5,029,109	1,082,001	17,656	98,441	3,256	122,662	309,828	25.3%
Kentucky	3,845,535	345,035	9,000	53,448	2,109	86,627	139,636	14.5%
Alabama	3,327,891	1,269,808	25,181	58,322	1,430	76,428	191,838	33.7%

Overall, poverty levels are slightly higher than the Tennessee average and the same as the Kentucky and Alabama averages (see Table 3-30). The average share of persons below poverty level in the area between 2010 and 2014 was 18.9 percent. Rhea County, Tennessee has the highest number of persons below the poverty level at 23.0 percent, followed by Hardin County at 22.2 percent. The remaining levels range from 14.1 percent in Limestone County, Alabama to 22.1 percent in White County, Tennessee.

3.16.2 Environmental Consequences

Potential socioeconomic impacts of the eight RLMPS would be associated with direct effects of jobs created by development on TVA-managed lands which would support future development (e.g., development of industrial facilities, campgrounds, marinas, etc.). Effects to socioeconomics could also occur because of changes in developed and dispersed recreation opportunities, as well as changes in the overall attractiveness of the area as a place to live or visit. Additionally, there could be indirect effects associated with population growth in response to new development and changes in tax revenues, employment and property values.

The TVA Land Policy clarifies the availability of TVA-managed lands for industrial, residential, and recreational uses, which in turn determines the potential for development. However, future industrial, commercial, and residential development is likely to occur in the region on private land, regardless of the uses and availability of TVA public lands.

3.16.2.1 Alternative – No Action Alternative

Under this alternative land use requests would be considered on a case-by-case basis and approved or denied based on their consistency with the current designations (where available) and on a review of potential environmental impacts, the TVA Land Policy, and other relevant considerations. However, the absence of comprehensive reservoir-wide land plans may result in land uses that do not fully optimize TVA's goals of multiple use and stewardship. There may be fewer opportunities to improve quality and availability of recreation opportunities, to improve the stewardship of natural and water resources, and to increase overall benefits of the reservoir lands. The lack of up-to-date plans could have negligible to minor impacts on the local economy over the long-term and limit economic development opportunities in the area.

.

3.16.2.2 Alternative B – Proposed Land Use Plan Alternative

Under this Alternative, changes to land planning strategies and land use zone allocations would be implemented, potentially generating greater total benefits from TVA lands. The amount of land allocated to Zone 2 (Project Operations), Zone 5 (Industrial) and Zone 6 (Developed Recreation) is slightly higher under Alternative B. However, because the proposed changes in land use allocations are relatively minor and generally reflect correspond to a "re-alignment" to reflect current land uses and conditions on each parcel the changes would have no substantive impact on the attractiveness of the area, local economy, or on economic development opportunities in the area. However, implementation of the individual land plans which would enhance management of public lands would have a minor beneficial impact on the local economy and economic development opportunities in the area through the enhancement of dispersed and developed recreation opportunities.

3.16.3 Environmental Justice

TVA's current management of its public lands on these reservoirs has no disproportionate impact to disadvantaged populations. There would be no change in existing conditions under Alternative A and therefore there would be no disproportionate impact to disadvantaged populations would occur.

The minority population in the vicinity of the eight RLMPs is comparable to the state and national levels. Although, poverty levels are higher in some of the counties where these reservoirs are located, the changes that would occur under Alternative B and would have minor beneficial impacts to the region's economy, enhancement of recreation opportunities and preservation of natural resources Therefore, no disproportionate impacts to disadvantaged populations are expected to occur under either of the alternatives.

3.17 Unavoidable Adverse Effects

A decision on the proposed alternatives in this planning document would not in itself result in unavoidable adverse effects. Potential effects may occur later when specific future projects are proposed and implemented. Project-specific NEPA reviews will be conducted for these future proposed projects and unavoidable adverse effects would be determined at that time.

3.18 Irreversible and Irretrievable Commitments

An irreversible or irretrievable commitment of resources refers to impacts on or losses to resources that cannot be recovered or reversed. Irreversible is a term that describes the loss of future options and applies primarily to the effects of the use of nonrenewable resources that are only renewable over long periods of time. Irretrievable is a term that applies to the loss of production of renewable resources such as timber, agricultural land, or wildlife habitat as a result of the proposed action. The production lost is irretrievable, but the action is not irreversible. If the use changes, it is possible to resume production. A decision on the proposed alternatives in this planning document would not in itself result in irreversible and irretrievable commitments. TVA zone allocations are not irreversible or irretrievable commitments as zone allocations can be changed.

Potential effects may occur later when specific future projects are proposed and implemented. Project-specific NEPA reviews will be conducted for proposed projects and irreversible and irretrievable commitments would be determined at that time. For example, construction of project operation, industrial, and recreational facilities/structures would involve irreversible commitment of fuel, energy, and building material resources. Use of these resources could occur in the future under both alternatives. However, irreversible impacts would be potentially greater under Alternative B due to the larger total number of acres allocated to Zones 2, 5, and 6 (Project Operations, Industrial and Developed Recreation) as compared to the total acres allocated to those zones under Alternative A.

3.19 Energy Resources and Conservation Potential

Developing and implementing land management plans does not involve a substantial use of energy resources. Short-term energy consumption would result from construction activities related to site preparation and development of new facilities, access roads, trails and shoreline stabilization activities.

Energy resources (primarily gasoline and diesel fuels) would be used to fuel machines needed to maintain wildlife habitat areas, fields around recreation facilities, grassy areas

and utility right of way, shoreline stabilization, management of invasive plants and other activities. Energy would also be used to support industrial activities allowed in land allocated to Zone 5 (Industrial).

Energy is consumed by campers, boaters, and other recreation users. TVA is encouraging campers who utilize developed recreation areas to reduce energy consumption. TVA has posted resource conservation tips at many campgrounds located on TVA land as part of its campground conservation program. TVA would encourage energy conservation measures to be utilized at recreation areas that may be developed in the future. These practices could potentially reduce energy usage under all alternatives.

TVA actively promotes public education and outreach to encourage energy efficiency and green energy offerings and promotes the integration of energy efficiency into community planning and building construction. TVA would work with potential users of TVA lands to achieve the greatest energy savings and to implement conservation practices.

These energy resources would be used under both Alternative A and Alternative B. However, under Alternative B, the amount of land allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation) would decrease by 1.7 and 2.4 percent, the amount of land allocated to Zone 2 (Project Operations), Zone 5 (Industrial) and Zone 7 (Shoreline Access) would increase by less than 1 percent and the land allocated to Zone 6 (Developed Recreation) would increase by 1.4 percent. Therefore Alternative B would likely require greater amounts of energy to maintain these lands and would have greater indirect impacts to energy use as more land is allocated to zones where future development could occur. This potential increase in energy use would be offset by the reduction in land allocated to Zone 4 (Natural Resource Conservation) and the associated reduction in energy needed to maintain these areas.

Under both alternatives, energy use associated with land planning would be minor because more than 75 percent of TVA land around the reservoirs would likely be maintained in a natural condition (Zones 3 and 4, Sensitive Resource Management and Natural Resource Conservation). The small amount of energy used while implementing the eight RLMPs would not impact regional energy use demands.

3.20 Relationship of Short-Term Uses to Long-Term Productivity

NEPA requires consideration of the “relationship between short-term uses of man’s environment and the maintenance and enhancement of long-term productivity” (40 CFR § 1502.16). For RLMPs, short-term uses generally are those that occur within a 10-year period, and long-term uses refers to later decades. Productivity is the capability of the land to provide beneficial outputs and values for future generations (e.g., industrial/business, recreational, or natural resource protection opportunities).

Generally, the land planning process results in few actions that adversely affect long-term productivity. Where practicable, TVA manages public lands for multiple uses, including recreation, natural resources, and protection of sensitive resources, for the goal of protecting these values for the public. The primary change under the proposed action has been the allocation of land to the new zone definition to accurately reflect current use.

Commitments of the land for developed uses (e.g., residential, industrial facilities, certain project operations facilities, some types of recreational development) have potential to decrease the productivity of land for agriculture, forestry, wildlife, certain recreational

activities, and other natural resources management actions. Under Alternative A, the percentage of lands allocated to Zones 2 (Project Operations), 5 (Industrial), 6 (Developed Recreation), and 7 (Shoreline Access) is approximately 18.6 percent and under Alternative B, it is approximately 22.7 percent. Therefore, Alternative B may have a minor adverse impact to the productivity of the land.

The allocation to Zone 3 (Sensitive Resource Management) and 4 (Natural Resource Conservation) increases the likelihood of long-term productivity of those lands. The percentage of the eight reservoirs lands allocated to Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation) is approximately 81.4 percent under Alternative A and approximately 77.3 percent under Alternative B.

The scenic and recreational values of the eight reservoirs are key factors in attracting new residents and visitors to the region. The current regional trends of minor increasing population and residential and commercial development are expected to continue at all reservoirs except for the Wilson Reservoir. New jobs and income would be generated by spending activities of new residents and visitors, which may lead to enhanced long-term socioeconomic productivity. Allocation of lands to zones that enhance scenic and dispersed recreational uses (i.e., Zones 3 and 4) is greatest under Alternative A, while allocation to developed recreational uses is greatest under Alternative B. However, as described in Section 3.2, many of the changes in zone reallocation associated with Alternative B generally correspond to a “re-alignment” to reflect current land uses and conditions on each parcel. Consequently, the long-term productivity of the land is expected to be similar between Alternatives A and B.

3.21 Cumulative Effects

The CEQ regulations (40 CFR 1500-1508) implementing the procedural provisions of the NEPA of 1969, as amended (42 USC 4321 et seq.) define cumulative impact as:

> “…the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions” (40 CFR § 1508.7).

Baseline conditions reflect the impacts of past and present actions. The impact analyses summarized in preceding sections are based on baseline conditions and either explicitly or implicitly consider cumulative impacts.

Past, present and reasonably foreseeable future actions that are appropriate for consideration in a cumulative effects analysis are those that which when viewed with the proposed action have cumulatively significant impacts. Due to the geographic scope of the reservoirs considered in this EIS, predicting future resource conditions involves substantial uncertainty. Future cumulative impacts can result not only from possible actions of TVA in accordance with the proposed reallocation of lands under Alternative B, but also from those of other agencies and the public. However, the assessment of potential impacts from land use reallocation is inherent in the analyses performed for each of the resource sections considered in Chapter 3. Therefore, this cumulative effects analysis considers the effects of potential future actions by others based on general trends that are anticipated within the reservoirs and the counties they are located in. These general trends include increasing human population, increasing demand for public recreation opportunities, and increasing development of natural habitat in rural areas. In addition, state and federal agencies would

continue efforts to conserve natural and cultural resources and provide dispersed and developed recreation opportunities. State agency efforts would also include reducing regional impacts to water quality through the total maximum daily load, water quality certifications, and other programs.

Regional resource quality is influenced by the aggregate actions of all landowners within the reservoirs watershed. For example, continued shoreline development spurred by population growth, whether for recreational or industrial purposes, could involve extensive clearing and grading, increased impervious surfaces, and result in possible point source pollution to the adjoining reservoir. Additionally, development or other changes in land use on non-TVA lands within the watershed could impact water quality or other environmental resources in lands surrounding each reservoir. However, the extent of impacts associated with any of these land uses would be dependent on the specifics of future development. New facilities with permitted discharges would be required to meet regulatory guidelines designed to prevent degradation of applicable water quality criteria, protection of endangered species, and preservation of cultural resources, among other factors. Any proposed land use would be required to protect environmental resources through either restricted development or the commitment to use BMPs to minimize impacts. The efforts of federal and state water quality regulators, municipal/local programs, and others including TVA's own environmental monitoring programs would combine in an effort to offset threats to environmental resources from uncontrolled economic growth and development. Further, as land allocated to Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation) would be retained in a relatively “natural” which would have a beneficial impact on environmental protection. Therefore, cumulative impacts to environmental resources are expected to be minor.

In addition, future actions by TVA also include updating the overarching CVLP, as discussed in Subsection 2.4.5.2. The CVLP target ranges for each land use zone are based on existing land plans and on RLAs. Overall, the proposed 2016 CVLP Allocation Range would increase slightly for Zone 2 (Project Operations), Zone 5 (Industrial), and Zone 7 (Shoreline Access). However, up to 81 percent of the lands would still be allocated to sensitive and natural resource management.

Land allocations proposed in the eight RLMPs would be used to update the allocation ranges proposed in the 2016 CVLP and would effect TVA’s management region-wide. Since the updated land allocations were primarily proposed to reflect existing conditions and identify suitable uses of land using resource data, stakeholder input, suitability and capability analyses, and TVA staff input, the updated CVLP ranges would better help TVA meet its purpose of the CVLP of maintaining a desired balance of shoreline development, recreational use, sensitive and natural resource management, and other uses.

CHAPTER 4 – LIST OF PREPARERS

4.1 Project Management

Name:	**Kelly Baxter (TVA)**
Education:	M.S., Plant Science and Landscape Systems and B.S., Botany
Project Role:	Reservoir Land Management Planning Project Manager
Experience:	13 years of experience in NEPA compliance and natural resource planning and management.

Name:	**Bill Elzinga (Amec Foster Wheeler)**
Education:	M.S. and B.S., Biology
Project Role:	Project Manager, NEPA Coordinator
Experience:	30 years of experience managing and performing NEPA analyses for electric utility industry, and state/federal agencies; ESA compliance; CWA evaluations.

Name:	**Matthew Higdon (TVA)**
Education:	M.S., Environmental Planning and B.A., History
Project Role:	Project Manager, NEPA Compliance
Experience:	13 years of experience in NEPA and natural resource planning.

Name:	**Heather Montgomery (TVA)**
Education:	B.S., Environmental Biology
Project Role:	Reservoir Land Management Planning Project Manager
Experience:	16 years of experience in land and natural resource planning and management.

4.2 Other Contributors

Name:	**Todd Amacker (TVA)**
Education:	M.S., Wildlife and Fisheries Science and B.S., Environmental Science
Project Role:	Natural Areas
Experience:	8 years of experience in ecological restoration, fisheries management, and geographic information systems

Name	**Justin Baker (Amec Foster Wheeler)**
Education	Ph.D., Biology; M.S., Biology and B.S., Biology
Project Role:	Aquatic Ecology
Experience:	Experience developing and executing fishery studies, investigating and evaluating threatened and endangered species distribution, conducting stream evaluations using the index of biotic integrity (IBI), providing assessments of habitat quality using the qualitative habitat evaluation index (QHEI), quantifying habitat use and preference of aquatic species, and assessing environmental impacts on glacial lakes and wetlands.

Name:	**Matt Basler (Amec Foster Wheeler)**
Education:	M.S., Fisheries Science/Management and B.S., Wildlife and Fisheries
Project Role:	Terrestrial Ecology
Experience:	Expertise in fisheries and wildlife science (population studies/surveys, habitat measurements and improvement, stream and wetland delineation, fisheries management, lake renovation, aquatic vegetation sampling and identification).

Name:	**Nicole Berger (TVA)**
Education:	M.S., Engineering Management and B.S., Civil/Environmental Engineering
Project Role:	Navigation
Experience:	14 years of experience in river forecasting and 1 year in navigation.

Name:	**Karen Boulware (Amec Foster Wheeler)**
Education:	M.S., Resource Planning and B.S., Geology
Project Role:	NEPA Lead, Socioeconomics and Environmental Justice, Natural Areas, Parks and Recreation, Noise
Experience:	25 years of professional experience in NEPA.

Name:	**Steve Coates, PE (Amec Foster Wheeler)**
Education:	B.S., Civil Engineering
Project Role:	Transportation
Experience:	25 years of experience in conceptual design of urban and rural highway projects, environmental compliance and stormwater management and civil site design, and NEPA compliance.

Name	**Adam Datillo (TVA)**
Education:	M.S., Forestry and B.S., Natural Resource Conservation Management
Project Role:	Vegetation, Threatened and endangered species (plants)
Experience:	15 years of experience in ecological restoration and plant ecology and 8 years in botany.

Name	**Elizabeth B. Hamrick (TVA)**
Education:	M.S., Wildlife and B.S., Biology
Project Role:	Threatened and endangered species (terrestrial animals), ecological resources (wildlife)
Experience:	9 years of experience in biological surveys and environmental reviews. .

Name	**Michaelyn Harle (TVA)**
Education:	Ph.D., Anthropology
Project Role:	Archaeology and cultural resources
Experience:	16 years of experience in archaeology and cultural resource management.

Name:	**Linda Hart (Amec Foster Wheeler)**
Education:	B.S., Business/Biology
Project Role	Technical Editing
Experience:	30 years of experience in production of large environmental documents including technical editing, formatting, and assembling.

Name:	**Richard Hart (Amec Foster Wheeler)**
Education:	A.S., Applied Science
Project Role:	Noise Analysis
Experience:	20 years of experience in Computer-Aided Design Technology, baseline noise measurements and noise modeling using the Traffic Noise Model.

Name	**Charles S. Howard (TVA)**
Education:	M.S., Zoology and B.S., Biology
Project Role:	Aquatic ecology and Threatened and endangered species (aquatics)
Experience:	21 years of experience with aquatic ecology and impact assessment.

Name	**Wayne Ingram P.E. (Amec Foster Wheeler)**
Education	B.S., Civil Engineering and B.S., Physics
Project Role	Surface Water
Experience:	30 years of experience in surface water engineering and analysis including drainage, stormwater management, water quality assessment, erosion and sedimentation, sediment transport, wetlands hydrology, stream restoration, and stormwater detention systems

Name	**Tim Keeling (TVA)**
Education:	B.S., Computer Science
Project Role:	TVA Natural Heritage database, data quality
Experience:	38 years of experience in application and database design.

Name	**Robert Marker (TVA)**
Education:	B.S., Recreation Resources Management
Project Role:	Recreation
Experience:	45 years of experience in recreation planning and management.

Name:	**Marty Marchaterre (Amec Foster Wheeler)**
Education:	JD, Law
Project Role:	Solid and Hazardous Waste, Cultural Resources
Experience:	25 years of experience in NEPA document preparation.

Name	**Charles L. McEntyre (TVA)**
Education:	M.S., Environmental Engineering and B.A., Biology
Project Role:	Surface water quality
Experience:	38 years of experience in water and wastewater engineering
Name:	**Stephanie Miller (Amec Foster Wheeler)**
Education:	M.S., Biology and B.S., Marine Biology
Project Role:	Land Use and Prime Farmland, Visual Resources
Experience:	8 years of experience in visual assessment, land use, aquatic and terrestrial ecology
Name	**Kim Pilarski-Hall (TVA)**
Education:	M.S. and B.S., Geography, Minor of Ecology
Project Role:	Wetlands and Natural Areas
Experience:	20 years experience in wetlands assessment and delineation
Name	**Craig Phillips (TVA)**
Education:	M.S. and B.S., Wildlife and Fisheries Science
Project Role:	Aquatic ecology, Threatened and endangered species (aquatics)
Experience:	7 years of experience in stream sampling and hydrological determinations.
Name	**Amos Smith (TVA)**
Education:	B.S., Geology
Project Role:	Ground water quality
Experience:	32 years of experience in solid and hazardous waste management.
Name:	**Lana Smith (Amec Foster Wheeler)**
Education:	M.S., Biology; B.S., Environmental Biology
Project Role:	Public Health and Safety
Experience:	21 years in Health and Safety, Hazard Analysis Assessment and Health and Safety Plan development
Name:	**Irene Weber (Amec Foster Wheeler)**
Education:	M.S., Biology and B.S., Plant Biology
Project Role:	Vegetation, Threatened and Endangered Species
Experience:	5 years of experience in ecology and plant biology.
Name	**Edward W. Wells III (TVA)**
Education:	M.A. and B.S., Anthropology
Project Role:	Cultural resources and archaeology
Experience:	13 years of experience in cultural resource management.
Name	**Doug White (TVA)**
Education:	B.S., Forestry
Project Role:	Environmental compliance
Experience:	2 years of experience in NEPA compliance and 14 years in natural and water resource management.

Name	**Carrie C. Williamson, PE, CFM (TVA)**
Education:	M.S. and B.S., Civil Engineering; Professional Engineer, Certified Floodplain Manager
Project Role:	Floodplains
Experience:	3 years in floodplains and flood risk, 3 years in river forecasting, and 11 years in compliance monitoring.

This page left blank intentionally

CHAPTER 5 – EIS RECIPIENTS

Following is a list of the agencies, tribes, and organizations who received copies of the Draft EIS or notice of its availability with instructions on how to access the EIS on the TVA project webpage.

Federal Agencies	
Coast Guard	Marine Safety Detachment, Nashville, Tennessee
Department of Army, Corps of Engineers	Memphis District, Memphis, Tennessee Mobile District, Mobile, Alabama Nashville District, Nashville, Tennessee Norfolk District, Norfolk, Virginia Regulatory Office, Asheville, North Carolina Regulatory Office, Decatur, Alabama Regulatory Office, Lenoir City, Tennessee Vicksburg District, Vicksburg, Mississippi
Department of the Interior	Office of Environmental Policy and Compliance, Washington, DC
Environmental Protection Agency	EPA Region 4, Atlanta, Georgia
Federal Highway Administration	North Carolina Division, Raleigh, North Carolina
Fish and Wildlife Service	Abingdon, Virginia Asheville, North Carolina Athens, Georgia Cookeville, Tennessee Daphne, Alabama Decatur, Alabama Frankfort, Kentucky Gloucester, Virginia Jackson, Mississippi Southeast Region, Atlanta, Georgia
Forest Service	Chattahoochee/Oconee National Forests, Gainesville, Georgia Cherokee National Forest, Cleveland, Tennessee Forest Service, Land Between the Lakes, Golden Pond, Kentucky Forest Service Region 8, Atlanta, Georgia National Forests in Alabama, Montgomery, Alabama National Forests in North Carolina, Asheville, North Carolina
National Park Service	Great Smoky Mountains National Park, Gatlinburg, Tennessee Southeast Region, Atlanta, Georgia

Natural Resources Conservation Service	State Conservationist, Alabama State Conservationist, Georgia State Conservationist, Kentucky State Conservationist, Mississippi State Conservationist, North Carolina State Conservationist, Tennessee State Conservationist, Virginia
State Agencies	
Alabama	Department of Agriculture and Industries, Montgomery Department of Conservation and Natural Resources, Montgomery Department of Economic and Community Affairs, Montgomery Department of Environmental Management, Montgomery Department of Transportation, Montgomery Forestry Commission, Montgomery Historical Commission, Montgomery
Georgia	Department of Economic Development, Atlanta Department of Natural Resources, Atlanta and Gainesville offices Jewett Center for Historic Preservation, Stockbridge
Kentucky	Department for Natural Resources, Frankfort Department for Environmental Protection, Frankfort Department of Fish and Wildlife, Frankfort Energy and Environment Cabinet, Frankfort Heritage Council and State Historic Preservation Officer, Frankfort State Clearinghouse, Frankfort Tourism, Arts, and Heritage Cabinet, Frankfort
Mississippi	Department of Archives and History, Jackson Department of Environmental Quality, Jackson Department of Finance and Administration, Jackson Department of Wildlife, Fisheries, and Parks, Jackson Mississippi Development Authority, Jackson
North Carolina	Department of Cultural Resources, Raleigh Department of Environment and Natural Resources, Raleigh State Clearinghouse, Raleigh Wildlife Resources Commission, Raleigh
Tennessee	Department of Agriculture, Nashville Department of Economic and Community Development, Nashville Department of Environment and Conservation, Nashville Department of Tourism Development, Nashville Department of Transportation, Nashville Historical Commission, Nashville

	Tennessee Duck River Development Agency Tennessee Wildlife Resources Agency, Nashville
Virginia	Department of Conservation and Recreation, Richmond Department of Environmental Quality, Richmond and Abingdon Department of Game and Inland Fisheries, Richmond Department of Historic Resources, Richmond
Federally Recognized Indian Tribes	
Eastern Band of Cherokee Indians Cherokee Nation Absentee Shawnee Tribe of Oklahoma The Chickasaw Nation Muscogee (Creek) Nation Alabama-Coushatta Tribe of Texas Kialegee Tribal Town Eastern Shawnee Tribe of Oklahoma Shawnee Tribe Coushatta Tribe of Louisiana United Keetoowah Band of Cherokee Indians in Oklahoma Alabama-Quassarte Tribal Town Thlopthlocco Tribal Town Poarch Band of Creek Indians	
Local Agencies, Organizations, and Businesses	
City of Sheffield, Alabama	Sheffield, AL
Alabama Bass Trail Student Angler Conservation Program	Decatur, AL
Alabama Cooperative Extension System	Auburn University, AL
Alabama Cooperative Extension System	Auburn University, AL
Alabama Elk River Development Agency	Elkmont, AL
Alabama Mountain Lakes Tourist Association	Decatur, AL
Alabama Mountains, Rivers and Valleys Resource Conservation and Development	Hartselle, AL
Alabama Scenic River Trails	Madison, AL
Bear Creek Development Authority	Hodges, AL
Brickyard Landing Marina	Decatur, AL
Central High School	Florence, AL
City of Florence, Alabama	Florence, AL
City of Muscle Shoals, Alabama	Muscle Shoals, AL
Colbert County, AL-Colbert County Courthouse	Tuscumbia, AL

Decatur-Morgan County Port Authority	Decatur, AL
Ditto Landing Marina	Huntsville, AL
Emerald Beach Marina	Killen, AL
Flint River Conservation Association	Brownsboro, AL
Franklin County Soil and Water Conservation District	Russelville, AL
Fresh Air Family	Sheffield, AL
Geological Survey of Alabama	Tuscaloosa, AL
Jay Landing	Decatur, AL
Joe Wheeler State Park	Rogersville, Al
Keep Athens-Limestone Beautiful -KALB	Athens, AL
Keep the Shoals Beautiful	Florence, AL
Legacy, Inc.	Montgomery, AL
Lucy's Branch Marina	Athens, AL
Madison Materials, Inc.	Blountsville, AL
Marina Mar	Florence, AL
North-Central Alabama Regional Council of Governments	Decatur, AL
North-Central Alabama Regional Council of Governments	Decatur, AL
Northwest Alabama Council of Local Governments	Muscle Shoals, AL
Northwest Alabama Council of Local Governments	Muscle Shoals, AL
Northwest Shoals Community College	Muscle Shoals, AL
Northwest Shoals Community College	Muscle Shoals, AL
Office for Research and Economic Development (University of Alabama)	Tuscaloosa, AL
Old Railroad Bridge Co., Inc	Sheffield, AL
One World Adventure	Mentone, AL
Poarch Band of Creek Indians	Atmore, AL
Riverwalk Marina	Decatur, AL
Rollison Marina	Florence, AL
Sheffield Kiwanis Club	Sheffield, AL
Shoals Community Clinic	Florence, AL
Shoals Environmental Alliance	Sheffield, AL
Southern Trout Magazine	Montevallo, AL
Shoals Wildflower Society	Killen, AL
Steenson Hollow Marina	Muscle Shoals, AL

The Nature Conservancy (Alabama)	Birmingham, AL
Top of Alabama Regional Council of Governments	Huntsville, AL
Triana Historical Society	Huntsville, AL
University of Alabama Office of Archaeological Research	Moundville, AL
University of North Alabama	Florence, AL
Whitesburg Boat and Yacht Club	Huntsville, AL
DOI Office of Environmental Policy and Compliance	Washington, DC
ARVC	Tallahassee, FL
Stratum Unlimited LLC	Ft. Myers, FL
Blue Ridge EMC	Morganton, GA
City Manager	Hiawassee, GA
City of Hiawassee	Hiawassee, GA
Economic Development Administration	Atlanta, GA
Fannin County Commissioners	Blue Ridge, GA
Fannin County Land Development	Blairsville, GA
Lake Nottely Improvement Association	Blairsville, GA
North Georgia Boatlift	Hiawassee, GA
Towns County	Hiawassee, GA
Union County Commission	Blairsville, GA
Union County Manager	Gainesville, GA
Living Lands & Waters	Atlanta, GA
Friends of Land Between the Lakes	East Moline, IL
Beech River Watershed Development Authority	Golden Pond, KY
Kentucky Association for Environmental Education	Frankfort, KY
Land Between The Lakes	Murray, KY
Navico	Mammoth Cave, KY
Sportsman's Anchor Resort/Marina	Benton, KY
Sugar Creek Bay Marina	Benton, KY
Town and Country Marina	Benton, KY
Whispering Oaks Resort	Frankfort, KY
Water's Edge RV Park and Marina	Minneapolis, MN
Mississippi Band of Choctaw Indians	Jackson, MS
Northeast Mississippi Planning and Development District	Tupelo, MS
Northeast Mississippi Planning and Development District	Booneville, MS
The Southeast Watershed Forum	Choctaw, MS

Tombigbee River Valley Water Management District	Olive Branch, MS
Tombigbee River Valley Water Management District	Tupelo, MS
New South Associates	Bozeman, MT
Blue Ridge Conservancy	Raleigh, NC
Blue Ridge Parkway	Asheville, NC
Cherokee County NC	Murphy, NC
Clay County Communities Revitalization Association CCCRA	Hayesville, NC
Clay County NC	Asheville, NC
Graham County, NC	Franklin, NC
Greg	Cullowhee, NC
Haywood Waterways Association	Swannanoa, NC
Hiwassee River Watershed Coalition	Murphy, NC
Land Trust For The Little Tennessee	Fontana Dam, NC
New South Associates, Inc	Clyde, NC
RiverLink Inc.	Weaverville, NC
Swain County, NC	Asheville, NC
Town of Murphy NC	Murphy, NC
Western Carolina University	Greensboro, NC
Freshwaters Illustrated	Locust Valley, NC
Trails Unlimited	Corvallis, OR
Tennessee Wildlife Resources Agency	Vonore, TN
Agency Creek	Fayetteville, TN
AMBC	Knoxville, TN
Anderson County Mayor	Clinton, TN
Appalachian Chapter of Trout Unlimited	Chattanooga, TN
B & B Marina	Birchwood, TN
Beech River Development Authority	Lexington, TN
Beech River Development Authority	Lexington, TN
Betty Fischer	Lenoir City, TN
Big Ridge Yacht Club	Harrison, TN
Blount County KAB	Unicoi, TN
Blue Water Campground	Dayton, TN
Boone Lake Association	Mountain City, TN
Boone Watershed Partnership	Butler, TN
Camp John Knox	Ten Mile, TN

Campbell County Environmental Officer and Litter Control	Jacksboro, TN
Cherokee Removal Memorial Park	Benton, TN
Chester Mead	Bluff City, TN
Chickamauga Marina	Chattanooga, TN
Choto Marina	Knoxville, TN
City Manager	Norris, TN
City of Loudon Parks and Recreation	Loudon, TN
City of Vonore, TN	Vonore, TN
City of Winchester	Winchester, TN
Cliff Hamblin	Lenoir City, TN
Concord Marina	Knoxville, TN
Conservation Fisheries, INC	Knoxville, TN
Cottonport Fish'N Camp	Decatur, TN
Cumberland River Compact	Nashville, TN
Dayton Boat Dock	Collegedale, TN
Discover Life in America Organization	Gatlinburg, TN
Duncan Boat Dock	Knoxville, TN
East Tennessee Development District	Alcoa, TN
East TN Quality Growth	Knoxville, TN
Emory River Watershed Association	Wartburg, TN
Executive Director, Anderson County Tourism Council	Clinton, TN
First Tennessee Development District	Johnson City, TN
Fort Loudoun Dam Marina	Lenoir City, TN
Fox Road Marina	Knoxville, TN
Friends of Short Springs	Tullahoma, TN
Friends of the Smokies	Kodak, TN
Gaits to Heaven	Culleoka, TN
Great Smoky Mountains Institute at Tremont	Townsend, TN
Greater Nashville Regional Council	Nashville, TN
Hales Bar Resort and Marina	Georgetown, TN
Harbor Lights Yacht Club	Soddy-Daisy, TN
Harpeth River Watershed Association	Brentwood, TN
Harrison Bay State Park	Harrison, TN
Hawkins County Industrial Development Board	Rogersville, TN
Holston Electric Cooperative	Rogersville, TN

Ijams Nature Center	Knoxville, TN
International Harbor Marina	Friendsville, TN
Island Cove Marina and Resort	Guild, TN
Jefferson County TN Chamber of Commerce	Dandridge, TN
Keep Blount Beautiful	Alcoa, TN
Keep Bristol Beautiful	Bristol, TN
LaFollette Utilities Board	LaFollette, TN
Lakeshore Marina	Chattanooga, TN
Larry Collier	Maynardville, TN
Layton Dayton	Knoxville, TN
Legacy Parks Foundation	Knoxville, TN
Lincoln County Soil Conservation District	Estill Springs, TN
Little River Watershed Association	Maryville, TN
Louisville Landing Marina	Knoxville, TN
Loyston Point Campground	Alcoa, TN
McMinnville Breakfast Rotary Foundation	McMinnville, TN
Melton Hill Lake Users Association	Clinton, TN
Memphis Area Association of Governments	Memphis, TN
Middle Nolichucky Watershed Alliance	Greenville, TN
Misty Harbor Marina	Soddy-Daisy, TN
NARVC	Walland, TN
National Parks Conservation Association	Knoxville, TN
National Wild Turkey Federation	Morristown, TN
Norris Lake Marina Association	Andersonville, TN
Northwest Tennessee Development District	Martin, TN
NRCS	Chattanooga, TN
Obed Watershed Community Association	Crossville, TN
Our Community Gives Back	Butler, TN
Paul Hargrove	Chattanooga, TN
Pine Harbor Marina	Soddy-Daisy, TN
PJ's Landing Marina	Dandridge, TN
Powell Valley Electric	New Tazewell, TN
Quail Forever	Lenoir City, TN
Recreation Educational Services Division	Nashville, TN
Rhea County Executive	Dayton, TN
Rhea Economic and Tourism Council	Dayton, TN

Roane Road Supervisor	Harriman, TN
Ross Landing Park	Winchester, TN
Sale Creek Marina	Soddy-Daisy, TN
Shady Grove Harbor	Signal Mountain, TN
SORBA Chattanooga	Chattanooga, TN
South Central Tennessee Development District	Columbia, TN
Southeast Tennessee Development District	Chattanooga, TN
Southern Off-Road Bicycle Association- Chattanooga Group	Chattanooga, TN
Southwest Tennessee Development District	Jackson, TN
Tellico Reservoir Development Agency	Vonore, TN
Tennessee Citizens for Wilderness Planning	Oak Ridge, TN
Tennessee Aquarium/River Rescue Chattanooga	Chattanooga, TN
Tennessee Association of Conservation Districts	Gray, TN
Tennessee Clean Water Network	Knoxville, TN
Tennessee Healthy Watershed Initiative	Humboldt, TN
The Breakers of Swan Bay	Paris, TN
Thompson Engineering	Chattanooga, TN
Tims Ford Council	Winchester, TN
Tims Ford State Park	Spring City, TN
TN Aquarium Conservation Institute	Chattanooga, TN
Toqua Campground	Vonore, TN
Town of Estill Springs	Delano, TN
Tri-County Sportsman's League Highway 58 Boat Dock	Dayton, TN
Trout Unlimited, Clinch River Chapter	Andersonville, TN
Trout Unlimited, Hiwassee Chapter	Nashville, TN
Union County Chamber of Commerce (TN)	Maynardville, TN
Union County Mayor	Maynardville, TN
University of Tennessee McClung Museum of Natural and Cultural History	Knoxville, TN
Upper Cumberland Development District	Cookeville, TN
US Geological Survey	Nashville, TN
Volunteer Landing	Knoxville, TN
Watauga Watershed Alliance	Mountain City, TN
Watershed Association of Tellico Reservoir (WATeR)	Loudon, TN
Watts Bar Lake Association	Soddy-Daisy, TN

Wildlife Cove Village and Marina	Camden, TN
Willow Point Marina	Knoxville, TN
WindRiver	Lenoir City, TN
Wolf River Conservancy	Memphis, TN
Clinch River Valley Initiative	Abingdon, VA
Director of Tourism, Lee County	Jonesville, VA
Director, Upper Tennessee River Roundtable	Abingdon, VA
Holston River Soil & Water Conservation District, VA	Abingdon, VA
Mount Rogers Planning District	Marion, VA
UVa Institute for Environmental Negotiation	Charlottesville, VA
Individuals	
Sharon Allen	
Alicia Avent	
Ross Baker	Sevierville, TN
Carl Barnes	Scottsboro, AL
Rich Belz	Knoxville, TN
Bill Blankenship	Abingdon, VA
Ernie Brewbaker	
Huie Burcham	Memphis, TN
Tammy Burruss	Shelbyville, TN
Bob Bush	Lenoir City, TN
Howard Byers	Memphis, TN
Ben Carr	Langston, AL
Duayne Carter	Bell Buckle, TN
Rhonda Cato	
Jefferson Chapman	Knoxville, TN
Jane Clemons	Nolensville, TN
Diane Cobble	Sevierville, TN
Brian Cole	Memphis, TN
Craig Cornwell	Guntersville, AL
Jennifer Cowher Williams	Guntersville, AL
Frank Dalton	Langston, AL
Martha Frances Dalton	Guntersville, AL
Terry and Tina Davenport	Shelbyville, TN
Dudley Deaton	Elizabethton, TN

Ray Fagg	Ten Mile, TN
Mike Fann	
Guy Foster	
Ralph D. Golden	Memphis, TN
Tracy Greene	Bristol, TN
Denita Guery-Hadziabdic	Knoxville, TN
Kevin Hamed	Abingdon, VA
Tiffany Hartwig	
Mary Ben Heflin	Knoxville, TN
Denise Herbert	Rock Island, TN
Jeffrey Hicks	Shelbyville, TN
Janice Higgins	Bradyville, TN
Joan Hillebrand	Corinth, MS
Danny Hill	Bristol, VA
Martina Hines	Memphis, TN
Earl Hodges	Memphis, TN
Selena Hollaway	Scottsboro, AL
Sally Horn	Knoxville, TN
Sheryl Howell	
Martha Huie	TN
Jim Hutchins	Memphis, TN
Fred Hutchinson	White House, TN
Bill James	Jasper, TN
Richard and Andrea Jameson	Memphis, TN
Mary Jennings	Memphis, TN
Ed Jones	Savannah, TN
Judy Kennamer	Memphis, TN
Jeff and Heather King	Memphis, TN
Bill Kittrell	Bryson City, NC
Andy Klinker	Ten Mile, TN
George Krueger	Grant, AL
Sara Kuebbing	Germantown, TN
Don and Elise Lake	Memphis, TN
Eric Lewis	Langston, AL
Rob Liddon	Memphis, TN
John Lichternman	Memphis, TN

Bridget Lofgren	Decatur, TN
Jonannes Loubser	Johns Creek, SC
Ruth Maddigan	Memphis, TN
Marsha Marascuilo	Booneville, MS
Karen Marcotte	Petersburg, TN
Bill Maury	Memphis, TN
Chris Mayes	Russelville, TN
Karen Mayne	Memphis, TN
Roger McCoy	Jackson, TN
Mike McDonough	Memphis, TN
Sara McMahan	
Randell Meyers	Corinth, MS
Marc Miller	Memphis, TN
John and Sharon Minor	Holly Springs, MS
Jake Mitchell	Memphis, TN
Bobby Mullins	
Caroll and Ed Nenon	Memphis, TN
Charles Netherly	Memphis, TN
Ned Noble	Corinth, MS
Jim Parker	Elizabethton, TN
Bill Pearson	Memphis, TN
Leslie Perry	Bradyville, TN
William Perry	Soddy Daisy, TN
Ann Phillipy	Memphis, TN
Martin Pleasant	Jackson, MS
Neelam Poudyai	Knoxville, TN
Sarah Ramberg	Cordova, TN
Michael and Melissa Reddoch	High Ridge, MO
Michelle Rose	Hixson, TN
Melinda Rosson	
Rosemary Saczawa	Maryville, TN
Royce Sampley	Manchester, TN
Kayla Schlemer	
Jan Simek	Knoxville, TN
Smotherman Family	

Melissa Sterling	
Mary Beth Sutton	TN
Cathy Taupr	Scottsboro, AL
Greg Taylor	Waynesboro
Freda Taylor	Cookeville, TN
Wayne Thomas	Knoxville, TN
Diana Threadgill	Memphis, TN
Ross and Leah Tierney	
Glen Turner	Parsons, TN
Glenda Van Baale	
Jacquelyn Elliott Way	
Allyson Willis	Abingdon, VA

This page left blank intentionally

CHAPTER 6 – SUPPORTING INFORMATION

6.1 Literature Cited

Alabama Invasive Plant Pest Council. 2012. Rescuing and Preserving Our Natural Heritage. Retrieved from www.se-eppc.org/alabama/ (accessed August 2016).

Benson, A.J., D. Raikow, J. Larson, A. Fusaro, and A.K. Bogdanoff. 2016. Dreissena polymorpha. USGS Nonindigenous Aquatic Species Database, Gainesville, Florida. Retrieved from https://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=5 (accessed October 2016).

COLE 1605(b) Report for Alabama, Kentucky, and Tennessee. COLE Development Group. October 21, 2016. http://www.ncasi2.org/GCOLE3/gcole.shtml

Cowardin, L. M, V. Carter, F. C. Golet, and E. T. LaRoe. 1979. Classification of Wetlands and Deep Water Habitats of the United States. U.S. Fish and Wildlife Service.

Dahl, T. E. 2006. Status and Trends of Wetlands in the Conterminous United States 1998 to 2004. Washington, D.C. U.S. Department of the Interior, U.S. Fish and Wildlife Service.

Drummond, Mark. 2014. Land Cover Trends Dataset, 1973-2000 -- 71. Interior Plateau Ecoregion. U.S. Geological Survey, Rocky Mountain Geographic Science Center, Denver, Colorado 80225. Retrieved from http://landcovertrends.usgs.gov/east/eco71Report.html (accessed July 2016).

EDDMapS. 2016. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Retrieved from http://www.eddmaps.org/ (accessed October 2016).

Etnier, D. A. and W. C. Starnes. 1993. The Fishes of Tennessee. Knoxville: University of Tennessee Press.

Faulkner, CH., and M.C.R. McCollough. 1973. Introductory Report of the Normandy Reservoir Salvage Project: Environmental Setting, Typology, and Survey, Volume 1. University of Tennessee, Department of Anthropology, Report of Investigation 11.

Higgins, John M. and W. Gary Brock. 2009. Overview of Reservoir Release Improvements at 20 TVA Dams. Journal of Energy Engineering, Vol. 125, No. 1, April, 1999.

Homer, C.G., Dewitz, J.A., Yang, L., Jin, S., Danielson, P., Xian, G., Coulston, J., Herold, N.D., Wickham, J.D., and Megown, K. 2015. Completion of the 2011 National Land Cover Database for the conterminous United States-Representing a decade of land cover change information. Photogrammetric Engineering and Remote Sensing, v. 81, no. 5, p. 345-354.

HUD (U.S. Department of Housing and Urban Development). 1985. The Noise Guidebook, HUD-953-CPD Washington, D.C., Superintendent of Documents, U.S. Government Printing Office.

Kentucky Exotic Pest Plant Council. 2015. Severe Threat, Significant Threat, and Lesser Threat. Retrieved from http://www.se-eppc.org/ky/ (accessed August 2016).

Lewis, T.M., and M. Kneberg. 1995. Prehistory of the Chickamauga Basin in Tennessee. Edited by Lynne P. Sullivan. Tennessee Anthropological Papers 1. Department of Anthropology, University of Tennessee, Knoxville.

McDonough, T. A. and G. D. Hickman. 1999. "Reservoir Fish Assemblage Index Development - A Tool for Assessing Ecological Health in Tennessee Valley Authority Impoundment," in Assessing the Sustainability and Biological Integrity of Water Resources Using Fish Communities, 523-540. Edited by T. Simon. Washington, D.C.: CRC Press.

Melillo, Jerry M., Terese (T.C.) Richmond, and Gary W. Yohe, Eds. 2014. Climate Change Impacts in the United States: The Third National Climate Assessment. U.S. Global Change Research Program.

NatureServe. 2016. NatureServe Web Service. Arlington, Virginia. USA. Retrieved from http://services.natureserve.org (accessed July 2016).

Parmalee, Paul W., and Bogan, Arthur E. 1998. The Freshwater Mussels of Tennessee. University of Tennessee, Knoxville, Tennessee.

Roy, Joseph. 2014. Integrated Water Quality Monitoring and Assessment Report, Water Quality in Alabama 2012-2014, Alabama Department of Environmental Management, Water Division - Water Quality Branch.

Tennessee Department of Environment and Conservation. 2014. TDEC Rare Species data viewer. Retrieved from https://tn.gov/environment/article/tdec-dataviewers (accessed July 2016).

Tennessee Exotic Pest Plant Council. 2009. TN-EPPC Invasive Exotic Pest Plants in Tennessee. December 2009 (2nd Edition). Retrieved from http://www.tneppc.org/ (accessed August 2016).

Tennessee Valley Authority. 1983. TVA Environmental Review Procedures.

————. 1985. Kentucky Reservoir Land Management Plan. Retrieved from https://www.tva.gov/file_source/TVA/Site%20Content/Environment/Environmental%20Stewardship/Land%20Management/Land%20Plans/Kentucky%20RLMP.pdf (accessed October 2016).

————. 1989. Chickamauga Reservoir Land Management Plan. Retrieved from https://www.tva.gov/file_source/TVA/Site%20Content/Environment/Environmental%20Stewardship/Land%20Management/Land%20Plans/Chickamauga%20RLMP.pdf (accessed October 2016).

————. 1990. Nickajack Reservoir Land Management Plan. Retrieved from https://www.tva.gov/file_source/TVA/Site%20Content/Environment/Environmental%20Stewardship/Land%20Management/Land%20Plans/Nickajack%20RLMP.pdf (accessed October 2016).

————. 1995. Wheeler Reservoir Land Management Plan. Retrieved from https://www.tva.gov/file_source/TVA/Site%20Content/Environment/Environmental%20Stewardship/Land%20Management/Land%20Plans/Wheeler%20RLMP.pdf (accessed October 2016).

————. 1996. Muscle Shoals/Wilson Dam Reservation Land Use Plan and Final Environmental Assessment. Retrieved from https://www.tva.gov/file_source/TVA/Site%20Content/Environment/Environmental%20Stewardship/Land%20Management/Land%20Plans/Wilson%20Dam%20and%20Muscle%20Shoals%20Reservations%20LUP.pdf (accessed October 2016).

_____. 1999. Shoreline Management Initiative (SMI): An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley Final Environmental Impact Statement. Retrieved from https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy (accessed October 2016).

————. 2004. Reservoir Operations Study Final Programmatic Environmental Impact Statement. Prepared in cooperation with the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service. Retrieved from https://www.tva.gov/Environment/Environmental-Stewardship/Environmental-Reviews/Reservoir-Operations-Study (accessed June 2016).

————. 2005a. General and Standard Conditions Section 26a and Land Use. TVA 17416 [5-2005].

————. 2005b. Tennessee Valley Authority Recreation Strategic Plan: A Framework for Providing Recreation Opportunities On and Along the Tennessee River 2004-2005.

————. 2011a. Natural Resource Plan: Alabama, Georgia, Kentucky, Mississippi, North Carolina, Tennessee, and Virginia, Final Environmental Impact Statement. Tennessee Valley Authority. 2011. Page 8. Retrieved from https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan (accessed October 2016).

————. 2011b. Muscle Shoals Reservation Redevelopment Final Environmental Impact Statement. Retrieved from https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Muscle-Shoals-Reservation-Redevelopment (accessed October 2016).

————. 2015. Integrated Resource Plan 2015 Final Supplemental Environmental Impact Statement Volume 1- Main Text. July 2015. Retrieved from https://tva.com/Environment/Environmental-Stewardship/Integrated-Resource-Plan (accessed October 2016).

————. 2016a. Floating Houses Policy Review Final Environmental Impact Statement. Alabama, Georgia, Kentucky, Mississippi, North Carolina, Tennessee, and Virginia. February 2016. Retrieved from https://www.tva.com/Environment/Shoreline-Construction/Floating-Houses (accessed October 2016).

————. 2016b. Reservoir Health Ratings. Retrieved from https://www.tva.gov/Environment/Environmental-Stewardship/Water-Quality/Reservoir-Health-Ratings (accessed July 2016).

————. 2016c. Tennessee Valley Authority Natural Heritage Database. Data Received 2016.

Tennessee Wildlife Resources Agency. 2016. Tennessee Watchable Wildlife. Retrieved from www.tennesseewatchablewildlife.org (accessed July 2016).

USDA. 2016. Federal Noxious Weed List. Effective as of December 10, 2010. Retrieved from https://www.google.com/search?sourceid=navclient&ie=UTF-8&rlz=1T4RVEB_enUS658US682&q=Federal+Noxious+Weed+List+of+2010 (accessed August 2016).

USDA NRCS. 2016a. The PLANTS Database. National Plant Data Team, Greensboro, North Carolina 27401-4901 USA. Retrieved from http://plants.usda.gov (accessed July 2016).

————. 2016b. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Retrieved from http://websoilsurvey.nrcs.usda.gov/ (accessed July 2016).

USDOI. 2008. U.S. Department of the Interior. Reclamation: Managing Water in the West; Resource Management Plan, Navajo Reservoir Area, Colorado and New Mexico, Final Environmental Assessment and Finding of No Significant Impact, June 2008.

USEPA. 1974. U.S. Environmental Protection Agency. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety, EPA-550/9-74-004, Washington, DC. Retrieved from http://www.nonoise.org/library/ levels74/levels74.htm (accessed September 2015).

————. 2016a. Green Book Nonattainment/Maintenance Status for Each County. Retrieved from www3.epa.gov/airquality/greenbook (accessed June 2016).

————. 2016b. Initial Designations for States and Territories – Area Designations for the 2012 Annual Fine Particle ($PM_{2.5}$) Standard. Retrieved from www.3.epa.gov/pmdesignations/2012standards/state.htm (accessed August 2016).

————. 2016c. Climate Change Indicators in the United States. Retrieved from https://www.epa.gov/climate-indicators (accessed August 2016).

U.S. Forest Service. 1995. Landscape Aesthetics: A Handbook for Scenery Management. Agriculture Handbook Number 701.

U.S. Fish and Wildlife Service. 2016a. IPaC Trust Resources Report. Information, Planning and Conservation System. Retrieved from https://ecos.fws.gov/ipac/ (accessed October 2016).

U.S. Fish and Wildlife Service. 2016b. National Wetlands Inventory Website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Retrieved from http://www.fws.gov/wetlands/ (accessed August 2016).

U.S. Water Resources Council. 1978. Floodplain Management Guidelines for Implementing EO 11988, 43 FR 6030, February 10, 1978. Second reprinting, FEMA July 1986.

U.S. Geological Survey. 2016. National Water Information System: Web Interface. Surface Water data. Tennessee River in Tennessee, Alabama, and Kentucky; Caney Fork River in Tennessee, and Duck River in Tennessee. Retrieved from http://waterdata.usgs.gov/nwis (accessed August 2016).

Webb, William S. 1939. An Archaeological Survey of the Wheeler Basin on the Tennessee River in Northern Alabama. Smithsonian Institution Bureau of American Ethnology, Bulletin 122. United States Government Printing Office, Washington, D.C.

6.2 Glossary of Terms

100-year floodplain	The area inundated by the 1 percent annual chance (or 100- year) flood.
agricultural licensing	TVA land licensed to a private individual for the production of agricultural crops; the land use is an interim use of TVA land.
attainment areas	Those areas of the U.S. that meet NAAQS as determined by measurements of air pollutant levels.
benthic	Refers to the bottom of a stream, river, or reservoir.
cumulative impacts	Impacts that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions, regardless of what agency or person undertakes such actions (40 CFR § 1508.7).
dam reservation	Lands generally maintained in a parklike setting by TVA to protect the integrity of the dam structure, hydroelectric facilities, and navigation lock. The reservation also provides for public visitor access to the TVA dam facilities and recreation opportunities, such as public boat access, bank fishing, camping, picnicking, etc.
deciduous	Vegetation that sheds leaves in autumn and produces new leaves in the spring.
direct impacts	Effects that are caused by the action and occur at the same time and place (40 CFR § 1508.8).
dissolved oxygen (DO)	The oxygen dissolved in water, necessary to sustain aquatic life. It is usually measured in milligrams per liter or parts per million.
drawdown	Area of reservoirs exposed between full summer pool and minimum winter pool levels during annual drawdown of the water level for flood control.
ecoregion	A relatively homogeneous area of similar geography, topography, climate, and soils that supports similar plant and animal life.
embayment	A bay or arm of the reservoir.
emergent wetland	Wetlands dominated by erect, rooted herbaceous plants, such as cattails and bulrush.
endangered species	A species in danger of extinction throughout all or a significant portion of its range or territory. Endangered species recognized by the ESA or similar state legislation have special legal status for their protection and recovery.
evergreen	Vegetation with leaves that stay green and persist all year.

evergreen-deciduous	Vegetation consisting of a mixture of plants that are both evergreen and deciduous, often referred to as mixed deciduous.
floodplains	Any land area susceptible to inundation by water from any source by a flood of selected frequency. For purposes of the National Flood Insurance Program, the floodplain, as a minimum, is that area subject to a 1 percent or greater chance of flooding (100-year flood) in any given year.
flowage easement tracts	Privately owned lakeshore properties where TVA has (1) the right to flood the land as part of its reservoir operations, (2) no rights for vegetation management, and (3) the authority to control structures, under Section 26a of the *TVA Act*.
forest	Vegetation having tree crowns overlapping, generally forming 60-100 percent cover (Grossman et al. 1998).
fragmentation	The process of breaking up a large area of relatively uniform habitat into smaller disconnected areas.
herbaceous vegetation	Dominated by forbs, generally forming at least 25 percent cover; other life-forms with less than 25 percent cover (Grossman et al 1998).
historic property	Defined in 36 CFR § 800.16(l) as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places.”
indirect impacts	Effects that are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable (40 CFR § 1508.8).
macroinvertebrates	Bottom-dwelling aquatic animals without vertebrae (skeletal spine), such as mollusks and arthropods.
mainstream reservoirs	Impoundments created by dams constructed across the Tennessee River.
marginal strip	The narrow strip of land retained by TVA between the summer operating pool and back-lying tracts that are owned or controlled by private or other public entities.
maximum shoreline contour (MSC)	An elevation typically 5 feet above the top of the gates of a TVA Dam. It is often the property boundary between TVA marginal strip property and adjoining private property.
NatureServe	An international network of biological inventories (natural heritage programs or conservation data centers) that provides information about the location and status of animals, plants, and habitat communities, and establishes a system for ranking the relative rarity of those resources

National Ambient Air Quality Standards (NAAQS)	Uniform national air quality standards established by the USEPA that restrict ambient levels of certain pollutants to protect public health (primary standards) or public welfare (secondary standards). Standards have been set for ozone, carbon monoxide, particulate matter, sulfur dioxide, nitrogen dioxide, and lead.
physiographic provinces	General divisions of land with each area having characteristic combinations of soil materials and topography.
phytoplankton	Aquatic organisms, often microscopic, capable of generating their own food via photosynthesis, e.g., algae.
polychlorinated biphenyls (PCBs)	PCBs are organic compounds historically used for many applications, especially as dielectric fluids in transformers and capacitors and coolants. PCBs are toxic and classified as persistent organic pollutants. PCB production was banned by the U.S. in 1976.
prime farmland	Generally regarded as the best land for farming, these areas are flat or gently rolling and are usually susceptible to little or no soil erosion. Prime farmland produces the most food, feed, fiber, forage, and oil seed crops with the least amount of fuel, fertilizer, and labor. It combines favorable soil quality, growing season, and moisture supply and, under careful management, can be farmed continuously and at a high level of productivity without degrading either the environment or the resource base. Prime farmland does not include land already in or committed to urban development, roads, or water storage.
riprap	Stones placed along the shoreline for bank stabilization and other purposes.
riparian zone	An area of land that has vegetation or physical characteristics reflective of permanent water influence. Typically a streamside zone or shoreline edge.
riverine	Having characteristics similar to a river.
row crops	Agricultural crops, such as corn, wheat, beans, cotton, etc., which are most efficiently grown in large quantities by planting and cultivating in lines or rows.
Section 26a review process	Section 26a of the *TVA Act* requires TVA review and approval of plans for obstructions, such as docks, fills, bridges, outfalls, water intakes, and riprap, before they are constructed across, in or along the Tennessee River and its tributaries. Applications for this approval are coordinated appropriately with TVA programs and USACE. USACE issues a joint public notice for those applications that are not covered by a USACE nationwide, general, or regional permit. The appropriate state water pollution control agency must also certify that the effluent from outfalls meets the applicable water quality standards.

scrub-shrub	Woody vegetation less than about 20 feet tall. Species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions.
shoreline	The line where the water of a TVA reservoir meets the shore when the water level is at the normal summer pool elevation.
shrublands	Vegetation consisting of shrubs generally greater than about 1.5 feet tall with individuals or clumps not touching or overlapping, generally forming less than 25 percent cover; tree cover generally less than 25 percent (Grossman et al. 1998).
stratification	The seasonal layering of water within a reservoir due to differences in temperature or chemical characteristics of the layers.
substrates	The base or material to which a plant is attached and from which it receives nutrients.
summer pool elevation	The normal upper level to which the reservoirs may be filled. Where storage space is available above this level, additional filling may be made as needed for flood control.
threatened species	A species threatened with extinction throughout all or a significant portion of its range or territory. Threatened species recognized by the ESA or similar state legislation have special legal status for their protection and recovery.
tributary reservoirs	Impoundments created by dams constructed across streams and rivers that eventually flow into the Tennessee River.
turbidity	All the organic and inorganic living and nonliving materials suspended in a water column. Higher levels of turbidity affect light penetration and typically decrease productivity of water bodies.
upland	The higher parts of a region, not closely associated with streams or lakes.
wetlands	As defined in *TVA Environmental Review Procedures*, wetlands are "those areas inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances do or would support, a prevalence of vegetation or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, mud flats, and natural ponds."
Wildlife Management Area	Land and/or water areas designated by state wildlife agencies, such as the Tennessee Wildlife Resources Agency (TWRA), for the protection and management of wildlife. These areas typically have specific hunting and trapping regulations as well as rules regarding appropriate uses of these areas by the public.

woodland	Open stands of trees with crowns not usually touching, generally forming 25 to 60 percent cover (Grossman et al. 1998).
zooplankton	Microscopic aquatic organisms that drift in the water column. Unlike phytoplankton, zooplankton are unable to generate food through photosynthesis and must instead consume other organisms.

INDEX

Advisory Council on Historic Preservation, 80
Alabama, 1, 3, 1, 4, 6, 9, v, 5, 7, 12, 30, 32, 38, 39, 40, 46, 51, 58, 59, 63, 65, 77, 94, 96, 98, 100, 101, 113, 115, 116
aquatic ecology, 5, iii, 14, 26, 53, 55, 67, 108
aquatic resource, 6, 55, 58
archaeological resource, 2, 10, 80, 83
area of potential effect, vii, 80, 82, 83
back-lying land, 3, 8, 13, 17, 21, 24, 32, 33, 53, 86, 127
best management practice, vii, 26, 28, 55, 58, 71, 105
Chickamauga, 1, 5, 6, ii, v, vi, 6, 7, 9, 10, 18, 19, 21, 22, 23, 30, 33, 34, 36, 38, 43, 54, 56, 57, 58, 61, 62, 63, 64, 67, 68, 69, 73, 75, 77, 81, 82, 84, 92, 114
Clean Water Act, 7, vii, 12, 14, 26, 63, 71, 73, 75, 107
Comprehensive Valleywide Land Plan, 1, 2, ii, v, vii, 5, 8, 11, 19, 22, 23, 24, 25, 36, 38, 116
cultural resource, 1, 8, 10, 21, 24, 26, 75, 80, 82, 83, 105, 109
cumulative effects, 10, 27, 104
deeded access, 17
developed recreation, 1, 4, 5, 6, 8, 9, 4, 20, 23, 25, 27, 29, 35, 36, 37, 40, 43, 44, 45, 49, 50, 51, 52, 55, 57, 58, 59, 70, 73, 74, 77, 78, 86, 90, 92, 93, 102, 103, 104, 105
dissolved oxygen, 6, vii, 53, 60, 62, 64, 67, 68, 117
draft environmental impact statement, 14
ecologically significant site, 8, 84, 86
endangered species, 1, 5, iii, v, vii, 8, 10, 12, 13, 15, 21, 26, 32, 55, 56, 57, 58, 59, 105, 108, 109, 114, 117
environmental impact statement, 3, 1, vii, 7, 9, 10, 11, 13, 115, 116
Executive Order, 7, vii, 12, 13, 14, 26, 28, 45, 71, 73, 75, 76, 78, 94
final environmental impact statement, 11, 15
fish, 5, vii, 32, 53, 54, 55, 64, 65, 66, 67, 75, 113, 114
flood, 2, 7, 10, 21, 30, 31, 32, 33, 60, 61, 75, 76, 80, 90, 116, 117, 119, 135
floodplain, 4, 7, 26, 45, 75, 76, 116, 117
flowage easement, 3, 2, 20, 33, 34, 117
Fort Loudoun, 1, 3, 5, 6, 7, 8, ii, v, vi, 6, 7, 9, 12, 18, 19, 21, 22, 23, 30, 33, 34, 35, 36, 43, 54, 61, 62, 63, 64, 67, 68, 69, 70, 73, 75, 77, 82, 84, 92, 93
Great Falls, 1, 2, 3, 5, 6, 7, 8, ii, v, vi, 6, 7, 9, 18, 19, 21, 22, 23, 24, 30, 31, 33, 34, 36, 38, 43, 54, 55, 56, 57, 59, 61, 62, 64, 67, 68, 69, 70, 72, 73, 75, 77, 81, 82, 84, 92, 93
industrial, 1, 3, 4, 5, 7, 9, 2, 3, 4, 11, 13, 17, 23, 24, 25, 27, 28, 29, 32, 34, 35, 37, 40, 49, 50, 51, 52, 55, 57, 58, 64, 65, 70, 73, 74, 76, 77, 78, 79, 81, 87, 88, 90, 91, 92, 93, 101, 102, 103, 104, 105, 127, 128, 135
Kentucky, 1, 3, 1, 3, 4, 5, 9, ii, v, vi, 5, 6, 7, 9, 10, 12, 18, 19, 21, 22, 23, 30, 31, 32, 33, 34, 36, 37, 38, 39, 40, 43, 46, 47, 51, 54, 56, 57, 59, 61, 62, 63, 64, 67, 68, 69, 73, 75, 77, 81, 82, 85, 92, 93, 94, 96, 98, 100, 101, 114, 115, 116
land use, 3, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, ii, iii, iv, v, 1, 2, 4, 5, 7, 10, 11, 12, 13, 15, 17, 18, 19, 20, 21, 24, 25, 26, 27, 28, 29, 32, 34, 35, 36, 37, 38, 40, 41, 42, 44, 45, 49, 51, 52, 53, 54, 55, 57, 58, 59, 70, 71, 72, 73, 74, 76, 78, 79, 80, 83, 85, 86, 87, 89, 90, 93, 101, 102, 104, 105, 107, 115, 116, 127, 135
marginal strip, 21, 33, 118

maximum shoreline contour, vii, 21, 118
mitigation, ii, 10, 27, 82, 83, 88, 89
mussel, 59
National Environmental Policy Act (NEPA), 1, iv, vii, 8, 11, 13, 18, 25, 73, 82, 94, 103, 104, 107, 108, 109
National Historic Preservation Act, 8, vii, 12, 13, 14, 26, 80, 82, 83
National Park Service, 13, 84
National Register of Historic Places, 8, vii, 2, 80, 81, 82, 83, 118
natural area, 1, 8, 9, 2, 3, 4, 8, 14, 84, 86, 89, 102, 136
Nickajack, 1, 5, 6, ii, v, vi, 6, 7, 10, 12, 18, 21, 22, 23, 30, 31, 33, 34, 36, 37, 38, 43, 54, 56, 57, 61, 63, 64, 67, 68, 69, 70, 73, 75, 77, 81, 82, 85, 113
Normandy, 1, 5, 6, 7, ii, v, vi, 6, 7, 10, 12, 13, 18, 21, 22, 23, 30, 32, 33, 34, 35, 37, 38, 43, 54, 56, 57, 59, 61, 64, 67, 68, 69, 70, 73, 75, 77, 81, 82, 85, 90, 113
plant communities, 45, 47, 51, 52
preferred alternative, 3, 10, ii, 27, 28
prime farmland, 4, ii, v, 13, 25, 38, 39, 40, 41, 42, 107, 118
programmatic agreement, 8, 26, 28, 83
recreation, 3, 4, 5, 7, iii, v, 1, 2, 3, 4, 5, 8, 11, 12, 13, 17, 18, 21, 24, 25, 26, 31, 32, 34, 35, 36, 37, 42, 43, 44, 45, 58, 60, 74, 75, 87, 90, 93, 101, 102, 103, 104, 105, 107, 115, 117, 127, 128, 135, 136
Reservoir Land Management Plan, 3, 1, 2, 3, 4, 5, 6, 8, 9, 10, ii, v, vii, 5, 7, 8, 9, 10, 11, 12, 13, 15, 17, 18, 19, 20, 21, 22, 23, 24, 27, 28, 29, 36, 37, 38, 41, 42, 43, 44, 45, 46, 48, 49, 51, 52, 53, 54, 56, 60, 71, 75, 76, 77, 79, 81, 84, 86, 87, 89, 93, 94, 102, 103
Reservoir Operations Study, 9, 13, 67, 115
residential development, 3, 9, 33, 35, 51, 53, 87, 88, 93, 101, 128
residential water use facilities, 4
scoping, ii, v, 11, 12, 20, 131
Section 106 of the National Historic Preservation Act, 80
Section 26a of the TVA Act, 2, 10, 117, 119
sensitive resource, 1, 2, 3, 5, 6, 8, 2, 3, 4, 10, 18, 20, 21, 22, 23, 24, 25, 27, 29, 30, 35, 36, 37, 40, 42, 43, 44, 49, 50, 51, 55, 57, 73, 74, 76, 78, 83, 84, 85, 89, 92, 104
shoreline access, 1, 3, 5, 6, ii, v, 4, 9, 17, 20, 21, 22, 23, 25, 26, 29, 33, 36, 37, 43, 44, 49, 50, 51, 52, 55, 57, 58, 59, 71, 73, 74, 78, 92, 103, 104
Shoreline Management Initiative, vii, 9, 10, 33, 115
Shoreline Management Policy, vii, 4, 9, 10, 17, 18, 22, 23, 24, 29, 36, 127
socioeconomics, 3, 9, iv, 10, 14, 27, 35, 94, 101, 104, 107
species, 5, v, 2, 3, 10, 12, 13, 14, 26, 28, 32, 45, 46, 47, 48, 49, 51, 52, 53, 54, 55, 56, 57, 58, 59, 108, 114, 115, 117, 119, 120, 136
State Historic Preservation Officer, 8, vii, 12, 13, 80, 82, 83
tailwater, 9, 62
Tennessee, 1, 3, 1, 4, 6, 7, 9, v, vii, 1, 5, 7, 9, 10, 12, 17, 30, 31, 32, 37, 38, 39, 40, 42, 46, 47, 51, 53, 54, 61, 62, 63, 64, 65, 66, 70, 77, 80, 81, 93, 94, 96, 98, 100, 101, 113, 114, 115, 116, 118, 119, 120, 127
Tennessee Valley Authority, 1, 3, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, v, vi, vii, 1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 41, 42, 43, 44, 46, 47, 48, 49, 51, 53, 54, 55, 56, 57, 58, 60, 61, 62, 63, 67, 68, 69, 70, 71, 72, 73, 75, 76, 78, 79, 80, 81, 82, 83, 84, 86, 88, 89, 92, 93, 94, 101, 102, 103, 104, 105, 107, 109, 114, 115, 116, 117, 118, 119, 120, 127, 128, 129, 135, 136
terrestrial ecology, 4, iii, 13, 26, 45, 72, 107, 108
threatened, 1, 5, iii, v, 2, 8, 13, 21, 26, 49, 55, 56, 57, 58, 59, 108, 109, 120

threatened species, 55, 120
TVA Land Policy, 2, 8, 17, 18, 34, 101
U.S. Army Corps of Engineers, vii, 71, 115, 119
U.S. Environmental Protection Agency, 8, 64, 77, 91, 92, 113
U.S. Fish and Wildlife Service, vii, 2, 13, 56, 73, 113, 115, 116
U.S. Forest Service, 84, 86, 116
uncommitted land, ii, 21, 44
visual resource, 8, iv, 8, 14, 27, 86, 88, 89, 107
wetland, 1, 4, 7, 8, iii, v, vi, 2, 8, 10, 12, 14, 15, 21, 26, 45, 47, 48, 50, 71, 72, 73, 74, 75, 85, 87, 88, 89, 108, 113, 117, 120
Wheeler, 1, 5, 6, ii, v, vi, 6, 7, 9, 10, 12, 18, 19, 21, 22, 23, 30, 32, 33, 34, 36, 37, 38, 43, 46, 54, 56, 57, 59, 61, 63, 65, 66, 67, 68, 69, 72, 73, 75, 77, 81, 82, 85, 92, 93, 107, 108, 109, 116
wildlife, 5, iii, vii, 2, 3, 12, 13, 18, 26, 31, 34, 45, 47, 48, 49, 51, 52, 53, 56, 65, 66, 68, 72, 75, 85, 88, 102, 103, 104, 108, 113, 116, 120, 127, 135, 136
Wilson, 1, 2, 5, 6, ii, v, vi, 6, 7, 10, 11, 18, 19, 21, 22, 23, 24, 30, 32, 33, 34, 36, 37, 39, 43, 46, 54, 55, 56, 57, 59, 61, 63, 65, 66, 67, 68, 69, 70, 73, 75, 77, 81, 82, 85, 92, 93, 104

This page intentionally left blank

Appendix A – TVA Land Policy

This page intentionally left blank

POLICY GOVERNING THE TENNESSEE VALLEY AUTHORITY'S RETENTION, DISPOSAL AND PLANNING OF INTERESTS IN REAL PROPERTY

The Tennessee Valley Authority (TVA) has been charged by Congress with improving navigation, controlling floods, providing for the proper use of marginal lands, providing for industrial development and providing power at rates as low as feasible, all for the general purpose of fostering the physical, economic, and social development of the Tennessee Valley region. The lands which TVA stewards in the name of the United States are some of the most important resources of the region. They have provided the foundation for the great dams and reservoirs that protect the region from flooding and secure for its residents the benefits of a navigable waterway and low-cost hydro-electricity. TVA's lands are the sites for its power generating system and the arteries for delivering power to those that need it. Many of the region's parks, recreation areas, and wildlife refuges that are so important for the region's quality of life grew up from lands that TVA made available. Also, TVA's lands often have been the catalyst for public and private economic development activities that support all of these activities.

TVA originally acquired approximately 1.3 million acres of land in the Tennessee Valley. The construction and operation of the reservoir system inundates approximately 470,000 acres with water. TVA has already transferred or sold approximately 508,000 acres, the majority of which was transferred to other federal and state agencies for public uses. TVA currently owns approximately 293,000 acres which continue to be managed pursuant to the TVA Act.

As stewards of this critically important resource, TVA has a duty to manage its lands wisely for present and future generations. Accordingly, it is TVA's policy to manage its lands to protect the integrated operation of the TVA reservoir and power systems, to provide for appropriate public use and enjoyment of the reservoir system, and to provide for continuing economic growth in the Valley. Recognizing that historical land transfers have contributed substantially to meeting multipurpose objectives. Further, it is TVA's policy to preserve reservoir lands remaining under its control in public ownership except in those rare instances where the benefits to the public will be so significant that transferring lands from TVA control to private ownership or another public entity is justified. This policy is explicated below.

Reservoir Properties

Land Planning- TVA shall continue to develop reservoir land management plans for its reservoir properties with substantial public input and with approval of the TVA Board of Directors. The land use allocations will be determined with consideration of the social, economic and environmental conditions around the reservoir. TVA shall consider changing a land use designation outside of the normal planning process only for water-access purposes for industrial or commercial recreation operations on privately owned back-lying land or to implement TVA's Shoreline Management Policy. Reservoir properties that have become fragmented from the reservoir will be evaluated to determine their public benefit. If it is determined by TVA's Chief Executive Officer that these fragmented properties have little or no public benefit, they shall be declared surplus and sold at public auction to the highest bidder in the same manner as surplus power or commercial properties.

Residential Use- TVA shall not allocate lands or land rights for residential use or dispose of reservoir properties for residential use.

Economic Development- TVA shall consider disposing of reservoir lands or land rights for industrial purposes or other businesses if the TVA property is located in an existing industrial park, or is designated for such purposes in a current reservoir land management plan and verified as suitable for such use by RSO&E and ED staff in a property survey. The TVA Board directs staff to complete this survey within six months of the approval of this policy. The TVA Board recognizes that property with water access, for either navigation or water supply, is a limited resource in the Valley and has preference for businesses that require water access. Future reservoir land management plans will consider industrial development opportunities as land allocations are made. TVA shall consider disposing of non-waterfront reservoir properties in industrial parks for any purpose permitted by the industrial park covenants. TVA shall not allocate lands or land rights for retail use or dispose of reservoir land or land rights for such use.

Recreation- TVA shall consider leasing or granting limited easements over lands for the development of commercial recreation facilities or public recreation purposes if the property is so designated in a reservoir land management plan and a survey conducted by RSO&E determines that the site remains suitable for recreational uses and a continued need exists for such use. The TVA Board directs staff to complete this survey within six months of the approval of this policy. Commercial recreation is defined as recreation with facilities that are provided for a fee to the public intending to produce a profit for the owner/operator. Public recreation is defined as recreation on publicly owned land with facilities developed by a public agency (or their concessionaire) and provides amenities open to the general public.

Commercial Recreation- TVA leases or easements for commercial recreation purposes shall limit the use primarily to water-based recreation designed to enhance the recreation potential of the natural resources of the river and be a stimulus for regional economic development. TVA leases or easements for commercial recreation purposes will contain restrictions against residential use, and no long term accommodations or individually owned units will be permitted.

Public Recreation- TVA leases or easements for public recreation purposes will contain restrictions against residential use, cabins, or other overnight accommodations (other than campgrounds) except if a recreation area is owned by a State or State agency and operated as a component of a State Park system in which case cabins and other overnight accommodations will be permitted.

Deed Restrictions over Private Lands- The TVA Board recognizes that much of TVA's lands were transferred upon specific agreement among the parties to conduct activities that would enhance recreation opportunities in the Valley. TVA will continue to consider the release or modification of flowage rights no longer necessary to TVA to operate the river system. TVA will consider the removal or modification of deed provisions to facilitate industrial development. TVA will also consider the removal or modification of deed restrictions that result in the public having recreational access to the tract, or if the tract is already open to the public, maintains that access. TVA will not remove or modify other deed restrictions for the purpose of facilitating residential development. To the extent permitted by the language of deed or other transfer or contractual instrument, TVA will administer its interest in former TVA land to achieve the goals of this policy.

Operational Uses of TVA Properties- TVA shall continue to utilize reservoir properties to meet the operational needs of the agency and its distributors as well as provide for public infrastructure needs such as roads, water and sewer lines, and other utilities, but will only consider requests for private infrastructure where TVA determines no other practicable alternative exists. Nothing in this policy is intended to prevent the disposal of tracts of land upon the recommendation of the General Counsel to settle claims or litigation or to address issues of contamination or potential contamination. In addition, TVA will continue to work with development agencies (and other partners) throughout the Valley to implement previously executed agreements.

Power & Commercial Properties

TVA's nonreservoir property—primarily power and commercial properties and mineral holdings--shall continue to be managed as power assets. The TVA Board directs staff to undertake a review of TVA mineral holdings for later policy consideration. Retention and disposal decisions will be primarily based on business considerations consistent with the TVA Act and other applicable requirements. TVA may enter into special arrangements with the distributors of TVA power. In addition, TVA may relinquish transmission line rights, if they are determined to be unnecessary for present or future operations and the current owner agrees to pay the enhanced fair market value of the property. In all other instances, TVA shall emphasize sales that generate the maximum competition among bidders at public auction and where possible shall not include use restrictions other than those designed to protect TVA's program interests or to meet legal or environmental requirements.

This page intentionally left blank

Appendix B – Forecast System Definitions

This page intentionally left blank

Forecast Designation	Definition
Dam Reservation	Land managed to protect the integrity of the dam and associated switchyards and power lines. Most TVA dam reservations provide a visitor reception building that overlooks the facilities. Day use recreational activities such as picnicking, fishing, hiking, and bird watching are encouraged. Campgrounds and boat launching facilities are often available. Generally speaking, maintenance levels and care of the facilities are higher on dam reservation land than on other areas of the reservoir. Hunting and unregulated camping are generally prohibited on the reservation.
Public Recreation	Land set aside for use by the public for recreational activities. This includes informal, dispersed activities such as hunting, hiking, fishing, and primitive camping, as well as more formal activities in developed areas such as parks, boat launching areas, and campgrounds.
Reservoir Operations (Islands)	Islands in the mainstream or tributaries used for informal, dispersed recreation and natural resource management projects.
Reservoir Operations (Mainland)	Generally narrow bands of shoreland retained by TVA for flood control and other reservoir operations purposes. Although there are no outstanding rights to construct water use facilities, TVA allowed back-lying residential property owners to construct facilities on these lands until 1992. Since 1992, facilities have only been allowed on reservoir operations land in those areas where existing facilities have been permitted.
Power Transmission and Power Needs	Land reserved for future power development or to maintain the integrity of existing power lines. Interim wildlife enhancement projects are often implemented on these lands.
Commercial Recreation	Land that TVA has reserved primarily for commercial use. This use includes, but is not limited to marinas, commercial boat docks, and campgrounds. Informal, dispersed recreational activities often occur on this land as an interim use.
Minor Commercial Landings	Tracts allocated for minor commercial landings available for public or private development of small-scale barge facilities. These are sites that can be used for transferring pulpwood, sand, gravel, and other natural resource commodities between barges and trucks. Since this use is intermittent and usually not a major activity, there would generally be no significant impact on adjacent land uses.
Industrial	Land that TVA identified as having potential for future industrial development. Informal, dispersed recreational activities often occur on this land as an interim use.
Navigation Safety Harbors	Sites used for tying off commercial barge tows and recreational boats during adverse weather conditions. Safety landings are straight stretches of shoreline fronting the commercial channel, and safety harbors are

Forecast Designation	Definition
Landings	shoreline areas recessed into coves or creeks off the commercial channel.
Forestry Research	Tracts used as ongoing sites for monitoring tree growth and stress. In addition, trees are used in these areas to produce reliable seed sources.
Steam Plant Study	Tracts set aside to potentially serve as a future steam plant location. The actual construction of a steam plant would depend on energy demands and cost-benefit considerations.
Wildlife Management	Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this designation. Management strategies include planting food plots, selective timber harvesting, and other forms of manipulating habitat to attract certain wildlife species. Appropriate activities in this zone include hunting, wildlife observation, and camping on undeveloped sites.
Small Wild Areas	These TVA natural areas are areas managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural or aesthetic qualities that can also support dispersed, low-impact types of outdoor recreation. Where appropriate, development could include foot trails, signs, parking areas, and primitive camping. Efforts can be undertaken to encourage public use and interpretation for visitors.

Appendix C – Conversion Tables

This page intentionally left blank

List of Tables

Table C-1. Chickamauga Reservoir Land Allocations 166
Table C-2. Fort Loudoun Reservoir Land Allocations 187
Table C-3. Great Falls Reservoir Land Allocations 193
Table C-4. Kentucky Reservoir Land Allocations 194
Table C-5. Nickajack Reservoir Land Allocations 223
Table C-6. Normandy Reservoir Land Allocations 226
Table C-7. Wheeler Reservoir Land Allocations 228
Table C-8. Wilson Reservoir Land Allocations 238

Table C-1. Chickamauga Reservoir Land Allocations

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
2	2	Project Operations	3	Sensitive Resource Management	226.3
3	6	Developed Recreation	6	Shoreline Access	16.8
3	7	Shoreline Access	6	Shoreline Access	1.7
4	4	Natural Resource Conservation	2	Project Operations	3.4
5	7	Shoreline Access	7	Shoreline Access	2.6
6	6	Developed Recreation	6	Shoreline Access	3.2
7	3	Sensitive Resource Management	4	Natural Resource Conservation	7.4
8	3	Sensitive Resource Management	3	Sensitive Resource Management	178.0
9	2	Project Operations	2	Project Operations	5.6
10	7	Shoreline Access	7	Shoreline Access	8.3
11	6	Developed Recreation	6	Shoreline Access	6.0
12	7	Shoreline Access	7	Shoreline Access	1.3
13	2	Project Operations	2	Project Operations	5.9
14	4	Natural Resource Conservation	4	Natural Resource Conservation	55.4
15	4	Natural Resource Conservation	4	Natural Resource Conservation	2.5
16	4	Natural Resource Conservation	7	Shoreline Access	0.3
17	4	Natural Resource Conservation	3	Sensitive Resource Management	0.6
18	4	Natural Resource Conservation	6	Shoreline Access	213.9
19	4	Natural Resource Conservation	4	Natural Resource Conservation	2.0
20	2	Project Operations	2	Project Operations	1.3
21	7	Shoreline Access	7	Shoreline Access	6.5
22	4	Natural Resource Conservation	6	Shoreline Access	2.4
23	4	Natural Resource Conservation	6	Shoreline Access	25.8
23	6	Developed	6	Shoreline Access	93.5

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Recreation			
23	7	Shoreline Access	6	Shoreline Access	0.6
24	7	Shoreline Access	7	Shoreline Access	59.0
25	7	Shoreline Access	6	Shoreline Access	25.2
26	4	Natural Resource Conservation	4	Natural Resource Conservation	1.3
27	7	Shoreline Access	7	Shoreline Access	15.6
28	4	Natural Resource Conservation	6	Shoreline Access	47.0
29	4	Natural Resource Conservation	2	Project Operations	2.9
30	4	Natural Resource Conservation	5	Industrial	0.1
31a	7	Shoreline Access	4	Natural Resource Conservation	0.1
31	7	Shoreline Access	7	Shoreline Access	13.7
32	6	Developed Recreation	6	Shoreline Access	1.4
32	7	Shoreline Access	6	Shoreline Access	0.3
33	7	Shoreline Access	7	Shoreline Access	12.7
34	4	Natural Resource Conservation	4	Natural Resource Conservation	6.2
35	4	Natural Resource Conservation	6	Shoreline Access	0.8
35	6	Developed Recreation	6	Shoreline Access	5.6
36	4	Natural Resource Conservation	2	Project Operations	1.2
36	6	Developed Recreation	2	Project Operations	0.2
37	3	Sensitive Resource Management	7	Shoreline Access	1.1
37	7	Shoreline Access	7	Shoreline Access	0.5
38	3	Sensitive Resource Management	4	Natural Resource Conservation	9.3
39	6	Developed Recreation	7	Shoreline Access	0.2
39	7	Shoreline Access	7	Shoreline Access	6.6
40	4	Natural Resource Conservation	4	Natural Resource Conservation	3.0
41a	7	Shoreline Access	4	Natural Resource Conservation	0.4
41	7	Shoreline Access	7	Shoreline Access	39.1
42	4	Natural Resource Conservation	4	Natural Resource Conservation	10.3
43	3	Sensitive	3	Sensitive	35.2

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Resource Management		Resource Management	
44	6	Developed Recreation	6	Shoreline Access	4.2
45	4	Natural Resource Conservation	2	Project Operations	6.7
45	6	Developed Recreation	2	Project Operations	1.4
46	4	Natural Resource Conservation	4	Natural Resource Conservation	90.6
47	4	Natural Resource Conservation	5	Industrial	2.3
48	4	Natural Resource Conservation	6	Shoreline Access	2.4
49a	7	Shoreline Access	4	Natural Resource Conservation	0.5
49	6	Developed Recreation	7	Shoreline Access	1.3
49	7	Shoreline Access	7	Shoreline Access	9.1
50	6	Developed Recreation	6	Shoreline Access	0.8
51	4	Natural Resource Conservation	6	Shoreline Access	3.6
52	7	Shoreline Access	7	Shoreline Access	1.1
53	3	Sensitive Resource Management	4	Natural Resource Conservation	6.3
54	6	Developed Recreation	6	Shoreline Access	20.4
55	7	Shoreline Access	7	Shoreline Access	3.1
56	7	Shoreline Access	2	Project Operations	2.9
57	7	Shoreline Access	5	Industrial	0.9
58	4	Natural Resource Conservation	6	Shoreline Access	4.6
58	6	Developed Recreation	6	Shoreline Access	46.6
59	2	Project Operations	2	Project Operations	8.2
59	4	Natural Resource Conservation	2	Project Operations	4.0
59	6	Developed Recreation	2	Project Operations	3.9
60	4	Natural Resource Conservation	4	Natural Resource Conservation	47.3
61	4	Natural Resource Conservation	4	Natural Resource Conservation	0.3
61	7	Shoreline Access	4	Natural Resource Conservation	2.4
62	4	Natural Resource	6	Shoreline Access	11.0

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Conservation			
63	7	Shoreline Access	7	Shoreline Access	6.6
64	4	Natural Resource Conservation	6	Shoreline Access	5.1
64	6	Developed Recreation	6	Shoreline Access	0.4
65	5	Industrial	3	Sensitive Resource Management	1.2
66	5	Industrial	7	Shoreline Access	2.2
67	4	Natural Resource Conservation	4	Natural Resource Conservation	31.6
68a	7	Shoreline Access	4	Natural Resource Conservation	0.2
68	7	Shoreline Access	7	Shoreline Access	16.4
69	3	Sensitive Resource Management	3	Sensitive Resource Management	19.3
70	7	Shoreline Access	7	Shoreline Access	7.7
71	4	Natural Resource Conservation	6	Shoreline Access	2.7
71	6	Developed Recreation	6	Shoreline Access	49.4
71	7	Shoreline Access	6	Shoreline Access	2.5
72	4	Natural Resource Conservation	2	Project Operations	0.2
72	6	Developed Recreation	2	Project Operations	3.9
73a	7	Shoreline Access	4	Natural Resource Conservation	0.1
73	7	Shoreline Access	7	Shoreline Access	15.9
74	4	Natural Resource Conservation	6	Shoreline Access	49.7
75	3	Sensitive Resource Management	4	Natural Resource Conservation	12.2
76	7	Shoreline Access	7	Shoreline Access	11.2
77	3	Sensitive Resource Management	3	Sensitive Resource Management	75.3
77	4	Natural Resource Conservation	3	Sensitive Resource Management	0.8
78	4	Natural Resource Conservation	6	Shoreline Access	13.1
78	7	Shoreline Access	6	Shoreline Access	1.8
79	7	Shoreline Access	7	Shoreline Access	1.0
80	4	Natural Resource Conservation	4	Natural Resource Conservation	13.4

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
80	7	Shoreline Access	4	Natural Resource Conservation	1.5
81a	7	Shoreline Access	4	Natural Resource Conservation	0.03
81	7	Shoreline Access	7	Shoreline Access	28.7
82	4	Natural Resource Conservation	4	Natural Resource Conservation	4.2
83	3	Sensitive Resource Management	3	Sensitive Resource Management	9.6
84	4	Natural Resource Conservation	4	Natural Resource Conservation	1.9
85a	7	Shoreline Access	4	Natural Resource Conservation	0.1
85	7	Shoreline Access	7	Shoreline Access	14.2
86	6	Developed Recreation	6	Shoreline Access	4.9
86	7	Shoreline Access	6	Shoreline Access	0.4
87	6	Developed Recreation	2	Project Operations	0.2
88	7	Shoreline Access	7	Shoreline Access	0.8
89	4	Natural Resource Conservation	4	Natural Resource Conservation	47.5
90	4	Natural Resource Conservation	2	Project Operations	1.3
90	6	Developed Recreation	2	Project Operations	3.3
91	4	Natural Resource Conservation	6	Shoreline Access	99.2
91	6	Developed Recreation	6	Shoreline Access	1.0
92	4	Natural Resource Conservation	4	Natural Resource Conservation	121.5
93	4	Natural Resource Conservation	2	Project Operations	2.3
94	4	Natural Resource Conservation	2	Project Operations	13.7
95	4	Natural Resource Conservation	4	Natural Resource Conservation	109.0
96	7	Shoreline Access	7	Shoreline Access	5.9
97	4	Natural Resource Conservation	4	Natural Resource Conservation	55.0
98	4	Natural Resource Conservation	6	Shoreline Access	15.4
98	6	Developed Recreation	6	Shoreline Access	31.9
99a	7	Shoreline Access	4	Natural Resource Conservation	0.2
99	4	Natural Resource Conservation	7	Shoreline Access	0.1

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
99	7	Shoreline Access	7	Shoreline Access	25.2
100	4	Natural Resource Conservation	6	Shoreline Access	0.8
101	4	Natural Resource Conservation	4	Natural Resource Conservation	5.8
102a	7	Shoreline Access	4	Natural Resource Conservation	0.1
102	7	Shoreline Access	7	Shoreline Access	26.5
103	3	Sensitive Resource Management	4	Natural Resource Conservation	35.3
103	4	Natural Resource Conservation	4	Natural Resource Conservation	72.9
104	2	Project Operations	2	Project Operations	11.4
105	4	Natural Resource Conservation	6	Shoreline Access	1.1
106	7	Shoreline Access	7	Shoreline Access	18.7
107	3	Sensitive Resource Management	3	Sensitive Resource Management	3.4
108	3	Sensitive Resource Management	3	Sensitive Resource Management	273.9
108	4	Natural Resource Conservation	3	Sensitive Resource Management	1.8
109	4	Natural Resource Conservation	4	Natural Resource Conservation	7.2
110	7	Shoreline Access	7	Shoreline Access	21.8
111	4	Natural Resource Conservation	3	Sensitive Resource Management	4.1
112	4	Natural Resource Conservation	6	Shoreline Access	8.5
113	7	Shoreline Access	4	Natural Resource Conservation	6.0
114	4	Natural Resource Conservation	6	Shoreline Access	0.8
115	7	Shoreline Access	2	Project Operations	0.3
116	7	Shoreline Access	7	Shoreline Access	3.0
117	4	Natural Resource Conservation	4	Natural Resource Conservation	7.0
117	7	Shoreline Access	4	Natural Resource Conservation	6.3
118	7	Shoreline Access	7	Shoreline Access	7.3
119	2	Project Operations	4	Natural Resource Conservation	6.8

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
119	4	Natural Resource Conservation	4	Natural Resource Conservation	23.3
119	6	Developed Recreation	4	Natural Resource Conservation	2.3
119	7	Shoreline Access	4	Natural Resource Conservation	4.6
120	2	Project Operations	2	Project Operations	39.7
120	4	Natural Resource Conservation	2	Project Operations	2.0
120	6	Developed Recreation	2	Project Operations	10.0
120	7	Shoreline Access	2	Project Operations	0.1
121	6	Developed Recreation	6	Shoreline Access	92.5
122	7	Shoreline Access	7	Shoreline Access	9.5
123	3	Sensitive Resource Management	4	Natural Resource Conservation	2.5
123	7	Shoreline Access	4	Natural Resource Conservation	1.1
124	6	Developed Recreation	6	Shoreline Access	2.0
125a	4	Natural Resource Conservation	4	Natural Resource Conservation	0.3
125a	7	Shoreline Access	4	Natural Resource Conservation	3.2
125	6	Developed Recreation	7	Shoreline Access	4.2
125	7	Shoreline Access	7	Shoreline Access	14.6
126	3	Sensitive Resource Management	4	Natural Resource Conservation	59.5
127	3	Sensitive Resource Management	3	Sensitive Resource Management	3.7
128	3	Sensitive Resource Management	4	Natural Resource Conservation	53.6
128	4	Natural Resource Conservation	4	Natural Resource Conservation	0.1
129	7	Shoreline Access	7	Shoreline Access	4.5
130	4	Natural Resource Conservation	6	Shoreline Access	5.6
130	6	Developed Recreation	6	Shoreline Access	3.7
131	2	Project Operations	2	Project Operations	1.9
131	4	Natural Resource	2	Project	0.5

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Conservation		Operations	
131	6	Developed Recreation	2	Project Operations	0.8
131	7	Shoreline Access	2	Project Operations	0.6
132	4	Natural Resource Conservation	3	Sensitive Resource Management	54.8
133	4	Natural Resource Conservation	7	Shoreline Access	0.03
133	7	Shoreline Access	7	Shoreline Access	67.6
134	4	Natural Resource Conservation	4	Natural Resource Conservation	11.3
135	4	Natural Resource Conservation	6	Shoreline Access	5.4
136	4	Natural Resource Conservation	4	Natural Resource Conservation	6.3
137	3	Sensitive Resource Management	4	Natural Resource Conservation	206.2
138	7	Shoreline Access	7	Shoreline Access	7.8
139	3	Sensitive Resource Management	7	Shoreline Access	1.1
139	7	Shoreline Access	7	Shoreline Access	7.8
140	3	Sensitive Resource Management	4	Natural Resource Conservation	150.7
141	7	Shoreline Access	7	Shoreline Access	6.5
142	4	Natural Resource Conservation	4	Natural Resource Conservation	27.2
143	7	Shoreline Access	2	Project Operations	1.1
144	7	Shoreline Access	7	Shoreline Access	5.8
145	4	Natural Resource Conservation	4	Natural Resource Conservation	61.6
146	4	Natural Resource Conservation	7	Shoreline Access	0.4
146	7	Shoreline Access	7	Shoreline Access	33.5
147	4	Natural Resource Conservation	4	Natural Resource Conservation	150.6
148	7	Shoreline Access	7	Shoreline Access	21.6
149	4	Natural Resource Conservation	2	Project Operations	0.4
149	7	Shoreline Access	2	Project Operations	0.04
150	4	Natural Resource Conservation	4	Natural Resource Conservation	0.2
151	4	Natural Resource	6	Shoreline Access	6.4

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Conservation			
152	7	Shoreline Access	7	Shoreline Access	23.7
153	3	Sensitive Resource Management	4	Natural Resource Conservation	232.1
153	7	Shoreline Access	4	Natural Resource Conservation	0.1
154	3	Sensitive Resource Management	2	Project Operations	4.3
155	7	Shoreline Access	7	Shoreline Access	10.1
156	3	Sensitive Resource Management	3	Sensitive Resource Management	262.6
157	2	Project Operations	2	Project Operations	2.9
158	3	Sensitive Resource Management	3	Sensitive Resource Management	34.4
159	7	Shoreline Access	7	Shoreline Access	35.4
160	4	Natural Resource Conservation	4	Natural Resource Conservation	66.2
161	6	Developed Recreation	6	Shoreline Access	6.2
162	4	Natural Resource Conservation	4	Natural Resource Conservation	62.9
163a	2	Project Operations	6	Shoreline Access	3.2
163	2	Project Operations	2	Project Operations	19.4
163	3	Sensitive Resource Management	2	Project Operations	0.2
163	4	Natural Resource Conservation	2	Project Operations	0.2
164	7	Shoreline Access	5	Industrial	8.8
165	4	Natural Resource Conservation	4	Natural Resource Conservation	277.2
165	7	Shoreline Access	4	Natural Resource Conservation	0.7
166	4	Natural Resource Conservation	4	Natural Resource Conservation	469.3
167	4	Natural Resource Conservation	7	Shoreline Access	4.6
167	7	Shoreline Access	7	Shoreline Access	34.2
168	3	Sensitive Resource Management	3	Sensitive Resource Management	92.1
168	4	Natural Resource	3	Sensitive	3.5

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Conservation		Resource Management	
168	7	Shoreline Access	3	Sensitive Resource Management	22.3
169	4	Natural Resource Conservation	4	Natural Resource Conservation	163.7
170	4	Natural Resource Conservation	2	Project Operations	0.9
171	4	Natural Resource Conservation	2	Project Operations	52.2
172	3	Sensitive Resource Management	3	Sensitive Resource Management	63.1
173	7	Shoreline Access	7	Shoreline Access	20.3
174	7	Shoreline Access	2	Project Operations	1.3
175	7	Shoreline Access	6	Shoreline Access	3.0
176	3	Sensitive Resource Management	7	Shoreline Access	0.02
176	7	Shoreline Access	7	Shoreline Access	0.5
177	7	Shoreline Access	7	Shoreline Access	37.8
178	6	Developed Recreation	6	Shoreline Access	1.1
178	7	Shoreline Access	6	Shoreline Access	0.3
179	3	Sensitive Resource Management	2	Project Operations	0.8
179	6	Developed Recreation	2	Project Operations	0.1
180	7	Shoreline Access	4	Natural Resource Conservation	4.9
181	4	Natural Resource Conservation	4	Natural Resource Conservation	0.2
182	3	Sensitive Resource Management	4	Natural Resource Conservation	6.4
183	7	Shoreline Access	7	Shoreline Access	2.1
184	2	Project Operations	3	Sensitive Resource Management	0.9
184	3	Sensitive Resource Management	3	Sensitive Resource Management	17.8
185	6	Developed Recreation	6	Shoreline Access	3.8
186	6	Developed Recreation	2	Project Operations	0.2

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
187	3	Sensitive Resource Management	3	Sensitive Resource Management	47.3
188	3	Sensitive Resource Management	7	Shoreline Access	0.01
188	7	Shoreline Access	7	Shoreline Access	12.8
189	7	Shoreline Access	4	Natural Resource Conservation	1.0
190	3	Sensitive Resource Management	4	Natural Resource Conservation	21.7
190	4	Natural Resource Conservation	4	Natural Resource Conservation	29.7
191	7	Shoreline Access	7	Shoreline Access	3.6
192	2	Project Operations	6	Shoreline Access	0.2
192	4	Natural Resource Conservation	6	Shoreline Access	1.1
193	3	Sensitive Resource Management	4	Natural Resource Conservation	380.0
193	4	Natural Resource Conservation	4	Natural Resource Conservation	49.2
194	7	Shoreline Access	7	Shoreline Access	21.8
195	4	Natural Resource Conservation	6	Shoreline Access	8.1
195	6	Developed Recreation	6	Shoreline Access	0.8
196	4	Natural Resource Conservation	2	Project Operations	1.6
196	7	Shoreline Access	2	Project Operations	0.1
197	4	Natural Resource Conservation	3	Sensitive Resource Management	30.9
198	7	Shoreline Access	7	Shoreline Access	13.3
199	3	Sensitive Resource Management	4	Natural Resource Conservation	39.0
199	4	Natural Resource Conservation	4	Natural Resource Conservation	0.1
200	7	Shoreline Access	7	Shoreline Access	10.2
201	4	Natural Resource Conservation	4	Natural Resource Conservation	4.1
201	7	Shoreline Access	4	Natural Resource Conservation	0.8
202	6	Developed Recreation	6	Shoreline Access	14.6

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
203	7	Shoreline Access	7	Shoreline Access	15.6
204	3	Sensitive Resource Management	4	Natural Resource Conservation	232.4
204	4	Natural Resource Conservation	4	Natural Resource Conservation	0.5
205	3	Sensitive Resource Management	7	Shoreline Access	0.7
205	7	Shoreline Access	7	Shoreline Access	30.7
206	3	Sensitive Resource Management	3	Sensitive Resource Management	17.4
206	4	Natural Resource Conservation	3	Sensitive Resource Management	0.3
207	7	Shoreline Access	7	Shoreline Access	17.9
208	3	Sensitive Resource Management	4	Natural Resource Conservation	1.0
208	4	Natural Resource Conservation	4	Natural Resource Conservation	158.7
209	7	Shoreline Access	7	Shoreline Access	67.9
210	6	Developed Recreation	6	Shoreline Access	10.9
211	6	Developed Recreation	2	Project Operations	0.9
212	3	Sensitive Resource Management	4	Natural Resource Conservation	13.9
212	4	Natural Resource Conservation	4	Natural Resource Conservation	0.3
212	7	Shoreline Access	4	Natural Resource Conservation	27.7
213	3	Sensitive Resource Management	3	Sensitive Resource Management	29.9
214	3	Sensitive Resource Management	4	Natural Resource Conservation	810.4
215	3	Sensitive Resource Management	4	Natural Resource Conservation	38.4
216	3	Sensitive Resource Management	2	Project Operations	2.2
217	3	Sensitive Resource Management	4	Natural Resource Conservation	20.0

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
218	3	Sensitive Resource Management	2	Project Operations	5.3
219	3	Sensitive Resource Management	6	Shoreline Access	3.1
219	6	Developed Recreation	6	Shoreline Access	30.9
219	7	Shoreline Access	6	Shoreline Access	0.5
220	2	Project Operations	2	Project Operations	5.5
221	6	Developed Recreation	4	Natural Resource Conservation	29.5
222	7	Shoreline Access	7	Shoreline Access	2.3
223	7	Shoreline Access	6	Shoreline Access	0.5
224	4	Natural Resource Conservation	4	Natural Resource Conservation	110.1
225	2	Project Operations	2	Project Operations	4.6
225	4	Natural Resource Conservation	2	Project Operations	3.0
226	7	Shoreline Access	7	Shoreline Access	25.3
227	4	Natural Resource Conservation	4	Natural Resource Conservation	1.8
228	4	Natural Resource Conservation	4	Natural Resource Conservation	155.7
229	4	Natural Resource Conservation	6	Shoreline Access	2.9
229	6	Developed Recreation	6	Shoreline Access	1.0
230	7	Shoreline Access	7	Shoreline Access	7.4
231	4	Natural Resource Conservation	4	Natural Resource Conservation	0.4
231	7	Shoreline Access	4	Natural Resource Conservation	1.2
232	4	Natural Resource Conservation	7	Shoreline Access	3.6
232	7	Shoreline Access	7	Shoreline Access	4.6
233	4	Natural Resource Conservation	3	Sensitive Resource Management	9.1
234	4	Natural Resource Conservation	6	Shoreline Access	10.1
235	7	Shoreline Access	7	Shoreline Access	10.9
236	4	Natural Resource Conservation	4	Natural Resource Conservation	75.6
237	4	Natural Resource Conservation	6	Shoreline Access	48.9
238	4	Natural Resource	7	Shoreline Access	3.0

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Conservation			
239	4	Natural Resource Conservation	4	Natural Resource Conservation	192.4
240	7	Shoreline Access	7	Shoreline Access	7.0
241	7	Shoreline Access	7	Shoreline Access	4.6
242	4	Natural Resource Conservation	4	Natural Resource Conservation	25.4
243	7	Shoreline Access	7	Shoreline Access	4.3
244	7	Shoreline Access	6	Shoreline Access	6.7
245	4	Natural Resource Conservation	4	Natural Resource Conservation	268.2
246	2	Project Operations	2	Project Operations	12.6
246	4	Natural Resource Conservation	2	Project Operations	7.4
246	7	Shoreline Access	2	Project Operations	0.5
247	4	Natural Resource Conservation	7	Shoreline Access	4.6
248	4	Natural Resource Conservation	2	Project Operations	1.3
249	5	Industrial	5	Industrial	2.2
250	5	Industrial	5	Industrial	129.9
251	2	Project Operations	2	Project Operations	0.3
251	3	Sensitive Resource Management	2	Project Operations	1.5
251	4	Natural Resource Conservation	2	Project Operations	0.2
251	6	Developed Recreation	2	Project Operations	0.4
252	3	Sensitive Resource Management	5	Industrial	26.5
252	4	Natural Resource Conservation	5	Industrial	8.2
252	5	Industrial	5	Industrial	12.9
252	6	Developed Recreation	5	Industrial	2.1
252	7	Shoreline Access	5	Industrial	1.0
253	6	Developed Recreation	6	Shoreline Access	1.7
254	3	Sensitive Resource Management	3	Sensitive Resource Management	277.1
254	4	Natural Resource Conservation	3	Sensitive Resource Management	0.1

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
254	6	Developed Recreation	3	Sensitive Resource Management	9.2
255	7	Shoreline Access	7	Shoreline Access	5.2
256	7	Shoreline Access	7	Shoreline Access	12.0
257	7	Shoreline Access	7	Shoreline Access	0.9
258	3	Sensitive Resource Management	2	Project Operations	12.0
259	3	Sensitive Resource Management	2	Project Operations	0.2
260	2	Project Operations	2	Project Operations	0.1
261	5	Industrial	5	Industrial	0.3
262	4	Natural Resource Conservation	6	Shoreline Access	0.9
262	6	Developed Recreation	6	Shoreline Access	14.2
263	4	Natural Resource Conservation	5	Industrial	1.1
263	5	Industrial	5	Industrial	30.2
263	7	Shoreline Access	5	Industrial	41.6
264	4	Natural Resource Conservation	3	Sensitive Resource Management	0.9
265	3	Sensitive Resource Management	3	Sensitive Resource Management	7.8
266	3	Sensitive Resource Management	4	Natural Resource Conservation	12.8
267	2	Project Operations	2	Project Operations	3.6
267	7	Shoreline Access	2	Project Operations	0.03
268	4	Natural Resource Conservation	6	Shoreline Access	15.3
269	4	Natural Resource Conservation	4	Natural Resource Conservation	65.2
270	2	Project Operations	2	Project Operations	6.7
271	3	Sensitive Resource Management	3	Sensitive Resource Management	41.0
272	7	Shoreline Access	7	Shoreline Access	17.8
273	7	Shoreline Access	6	Shoreline Access	3.4
274	4	Natural Resource Conservation	4	Natural Resource Conservation	425.8

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
275	2	Project Operations	2	Project Operations	6.3
275	4	Natural Resource Conservation	2	Project Operations	0.1
276	7	Shoreline Access	7	Shoreline Access	7.1
277	4	Natural Resource Conservation	6	Shoreline Access	6.2
278	7	Shoreline Access	7	Shoreline Access	15.4
279	4	Natural Resource Conservation	3	Sensitive Resource Management	102.2
280	4	Natural Resource Conservation	4	Natural Resource Conservation	36.8
281	4	Natural Resource Conservation	6	Shoreline Access	0.9
282	4	Natural Resource Conservation	7	Shoreline Access	7.0
282	7	Shoreline Access	7	Shoreline Access	10.9
283	4	Natural Resource Conservation	4	Natural Resource Conservation	104.5
284	4	Natural Resource Conservation	6	Shoreline Access	3.8
285	2	Project Operations	2	Project Operations	4.6
285	7	Shoreline Access	2	Project Operations	0.03
286	4	Natural Resource Conservation	4	Natural Resource Conservation	101.6
287	7	Shoreline Access	7	Shoreline Access	16.0
288	4	Natural Resource Conservation	4	Natural Resource Conservation	48.1
289	6	Developed Recreation	6	Shoreline Access	3.3
290	7	Shoreline Access	7	Shoreline Access	14.8
291	4	Natural Resource Conservation	4	Natural Resource Conservation	5.3
292	3	Sensitive Resource Management	4	Natural Resource Conservation	238.3
293	3	Sensitive Resource Management	4	Natural Resource Conservation	735.9
294	3	Sensitive Resource Management	2	Project Operations	4.4
295	6	Developed Recreation	6	Shoreline Access	36.2
296	3	Sensitive Resource Management	3	Sensitive Resource Management	13.8

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
297	2	Project Operations	2	Project Operations	0.4
298	7	Shoreline Access	7	Shoreline Access	12.7
299	4	Natural Resource Conservation	6	Shoreline Access	2.6
299	6	Developed Recreation	6	Shoreline Access	1.4
300	4	Natural Resource Conservation	2	Project Operations	0.1
301	7	Shoreline Access	7	Shoreline Access	2.9
302	7	Shoreline Access	7	Shoreline Access	25.3
303	4	Natural Resource Conservation	3	Sensitive Resource Management	3.1
304	4	Natural Resource Conservation	6	Shoreline Access	8.3
305	4	Natural Resource Conservation	4	Natural Resource Conservation	259.3
306	4	Natural Resource Conservation	6	Shoreline Access	2.2
306	6	Developed Recreation	6	Shoreline Access	44.7
307	7	Shoreline Access	7	Shoreline Access	13.3
308	3	Sensitive Resource Management	3	Sensitive Resource Management	202.1
309	7	Shoreline Access	7	Shoreline Access	14.6
310	4	Natural Resource Conservation	4	Natural Resource Conservation	150.4
311	4	Natural Resource Conservation	2	Project Operations	6.4
312	3	Sensitive Resource Management	3	Sensitive Resource Management	197.2
312	4	Natural Resource Conservation	3	Sensitive Resource Management	1.6
313	6	Developed Recreation	6	Shoreline Access	3.9
314	7	Shoreline Access	7	Shoreline Access	16.3
315	4	Natural Resource Conservation	4	Natural Resource Conservation	2.3
315	7	Shoreline Access	4	Natural Resource Conservation	22.1
316	7	Shoreline Access	7	Shoreline Access	4.8
317	3	Sensitive Resource Management	3	Sensitive Resource Management	49.2
318	7	Shoreline Access	7	Shoreline Access	16.1

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
319	4	Natural Resource Conservation	4	Natural Resource Conservation	435.0
320	3	Sensitive Resource Management	2	Project Operations	8.8
320	4	Natural Resource Conservation	2	Project Operations	7.8
321	4	Natural Resource Conservation	6	Shoreline Access	1.2
321	6	Developed Recreation	6	Shoreline Access	0.9
322	4	Natural Resource Conservation	3	Sensitive Resource Management	6.6
323	7	Shoreline Access	7	Shoreline Access	11.1
324	2	Project Operations	2	Project Operations	22.0
325	3	Sensitive Resource Management	4	Natural Resource Conservation	151.3
325	4	Natural Resource Conservation	4	Natural Resource Conservation	3.7
326	3	Sensitive Resource Management	6	Shoreline Access	0.6
326	6	Developed Recreation	6	Shoreline Access	17.7
327	3	Sensitive Resource Management	3	Sensitive Resource Management	0.9
328	4	Natural Resource Conservation	3	Sensitive Resource Management	1.5
329	4	Natural Resource Conservation	6	Shoreline Access	12.4
330	7	Shoreline Access	7	Shoreline Access	5.2
331	3	Sensitive Resource Management	3	Sensitive Resource Management	15.3
332	7	Shoreline Access	7	Shoreline Access	14.5
333	7	Shoreline Access	2	Project Operations	0.6
334	7	Shoreline Access	7	Shoreline Access	9.6
335	4	Natural Resource Conservation	2	Project Operations	0.9
336	4	Natural Resource Conservation	4	Natural Resource Conservation	8.8
337	2	Project Operations	2	Project Operations	32.1
337	4	Natural Resource	2	Project	2.9

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Conservation		Operations	
337	7	Shoreline Access	2	Project Operations	0.2
338	4	Natural Resource Conservation	4	Natural Resource Conservation	4.3
339	6	Developed Recreation	6	Shoreline Access	2.7
340	4	Natural Resource Conservation	6	Shoreline Access	439.6
340	6	Developed Recreation	6	Shoreline Access	50.7
341a	7	Shoreline Access	4	Natural Resource Conservation	0.2
341	7	Shoreline Access	7	Shoreline Access	25.5
342	4	Natural Resource Conservation	6	Shoreline Access	4.0
343	4	Natural Resource Conservation	6	Shoreline Access	0.8
343	6	Developed Recreation	6	Shoreline Access	0.5
344	4	Natural Resource Conservation	2	Project Operations	1.2
344	6	Developed Recreation	2	Project Operations	0.1
345	7	Shoreline Access	7	Shoreline Access	91.1
346	3	Sensitive Resource Management	3	Sensitive Resource Management	0.7
346	4	Natural Resource Conservation	3	Sensitive Resource Management	0.8
347	7	Shoreline Access	2	Project Operations	0.1
348	4	Natural Resource Conservation	4	Natural Resource Conservation	5.0
349	7	Shoreline Access	7	Shoreline Access	1.8
350	7	Shoreline Access	7	Shoreline Access	31.5
351	4	Natural Resource Conservation	6	Shoreline Access	6.3
352	4	Natural Resource Conservation	2	Project Operations	0.1
353	4	Natural Resource Conservation	3	Sensitive Resource Management	65.7
353	7	Shoreline Access	3	Sensitive Resource Management	1.2
354	7	Shoreline Access	4	Natural Resource Conservation	0.8

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
35	4	Natural Resource Conservation	4	Natural Resource Conservation	197.7
356	4	Natural Resource Conservation	2	Project Operations	30.8
356	6	Developed Recreation	2	Project Operations	0.8
357	4	Natural Resource Conservation	3	Sensitive Resource Management	3.3
358	4	Natural Resource Conservation	6	Shoreline Access	0.7
358	6	Developed Recreation	6	Shoreline Access	5.3
359	4	Natural Resource Conservation	4	Natural Resource Conservation	19.6
360	7	Shoreline Access	7	Shoreline Access	26.2
361	6	Developed Recreation	6	Shoreline Access	1.1
362	4	Natural Resource Conservation	4	Natural Resource Conservation	5.6
363	4	Natural Resource Conservation	2	Project Operations	0.9
364	7	Shoreline Access	7	Shoreline Access	8.6
365	4	Natural Resource Conservation	4	Natural Resource Conservation	10.2
366	7	Shoreline Access	6	Shoreline Access	9.7
367	7	Shoreline Access	2	Project Operations	0.4
368	7	Shoreline Access	7	Shoreline Access	2.4
369	6	Developed Recreation	6	Shoreline Access	8.1
369	7	Shoreline Access	6	Shoreline Access	2.7
370	7	Shoreline Access	7	Shoreline Access	4.5
371	4	Natural Resource Conservation	6	Shoreline Access	1.2
372	4	Natural Resource Conservation	4	Natural Resource Conservation	77.3
373	4	Natural Resource Conservation	2	Project Operations	5.4
374	6	Developed Recreation	6	Shoreline Access	4.4
375	7	Shoreline Access	7	Shoreline Access	1.2
376	3	Sensitive Resource Management	3	Sensitive Resource Management	43.0
377	3	Sensitive Resource Management	2	Project Operations	2.5
378	6	Developed	6	Shoreline Access	36.1

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Recreation			
379	2	Project Operations	2	Project Operations	2.0
380	6	Developed Recreation	2	Project Operations	1.2
381a	4	Natural Resource Conservation	4	Natural Resource Conservation	0.1
381	7	Shoreline Access	7	Shoreline Access	12.7
382	2	Project Operations	6	Shoreline Access	17.5

Table C-2. Fort Loudoun Reservoir Land Allocations

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
1	6	Developed Recreation	2	Project Operations	0.8
2	6	Developed Recreation	6	Developed Recreation	1.4
3	2	Project Operations	2	Project Operations	386.1
4	Not Planned		2	Project Operations	7.8
5	6	Developed Recreation	6	Developed Recreation	49.6
6	6	Developed Recreation	6	Developed Recreation	38.2
7	Not Planned		6	Developed Recreation	0.3
8	7	Shoreline Access	7	Shoreline Access	2.1
9	Not Planned		6	Developed Recreation	0.2
10	4	Natural Resource Conservation	4	Natural Resource Conservation	35.7
11	2	Project Operations	2	Project Operations	2.6
12	6	Developed Recreation	6	Developed Recreation	1.5
13	6	Developed Recreation	6	Developed Recreation	10.3
14	6	Developed Recreation	6	Developed Recreation	1.1
15	4	Natural Resource Conservation	4	Natural Resource Conservation	2.4
16	4	Natural Resource Conservation	2	Project Operations	0.5
17	7	Shoreline Access	7	Shoreline Access	3.0
18	2	Project Operations	2	Project Operations	2.8
19	3	Sensitive Resource Management	3	Sensitive Resource Management	36.9
20	Not Planned		4	Natural Resource Conservation	0.5
20	4	Natural Resource Conservation	4	Natural Resource Conservation	7.8
21	Not Planned		6	Developed Recreation	7.4
21	6	Developed Recreation	6	Developed Recreation	58.1
22	6	Developed Recreation	2	Project Operations	0.7
23	Not Planned		4	Natural Resource Conservation	0.8
23	4	Natural Resource	4	Natural Resource	4.9

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Conservation		Conservation	
24	6	Developed Recreation	6	Developed Recreation	4.9
25	Not Planned		2	Project Operations	1.0
26	Not Planned		5	Industrial	0.3
26	5	Industrial	5	Industrial	3.6
26	7	Shoreline Access	5	Industrial	0.4
27	Not Planned		2	Project Operations	0.6
28	5	Industrial	4	Natural Resource Conservation	1.2
28	7	Shoreline Access	4	Natural Resource Conservation	1.3
29	5	Industrial	2	Project Operations	0.3
30	7	Shoreline Access	7	Shoreline Access	0.9
31	7	Shoreline Access	2	Project Operations	0.3
32	6	Developed Recreation	6	Developed Recreation	1.9
33	6	Developed Recreation	6	Developed Recreation	10.5
34	7	Shoreline Access	7	Shoreline Access	2.4
35	Not Planned		6	Developed Recreation	2.5
35	6	Developed Recreation	6	Developed Recreation	1.3
36	Not Planned		6	Developed Recreation	5.0
37	Not Planned		2	Project Operations	3.1
38	Not Planned		4	Natural Resource Conservation	0.5
39	Not Planned		2	Project Operations	0.1
40	Not Planned		6	Developed Recreation	6.8
41	Not Planned		6	Developed Recreation	1.8
42	Not Planned		2	Project Operations	2.4
43	Not Planned		6	Developed Recreation	1.7
44	4	Natural Resource Conservation	3	Sensitive Resource Management	2.7
45	2	Project Operations	2	Project Operations	2.0
46	6	Developed Recreation	6	Developed Recreation	4.7
47	4	Natural Resource Conservation	3	Sensitive Resource Management	1.7
48	6	Developed	6	Developed	69.1

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Recreation		Recreation	
49	4	Natural Resource Conservation	3	Sensitive Resource Management	8.7
50	Not Planned		2	Project Operations	3.5
50	2	Project Operations	2	Project Operations	0.1
51	5	Industrial	5	Industrial	0.7
52	6	Developed Recreation	6	Developed Recreation	0.2
53	5	Industrial	2	Project Operations	5.9
53	6	Developed Recreation	2	Project Operations	7.4
54	6	Developed Recreation	5	Industrial	3.5
55	6	Developed Recreation	6	Developed Recreation	9.9
56	6	Developed Recreation	6	Developed Recreation	0.6
57	4	Natural Resource Conservation	6	Developed Recreation	4.1
58	4	Natural Resource Conservation	2	Project Operations	1.9
58	6	Developed Recreation	2	Project Operations	0.5
59	6	Developed Recreation	6	Developed Recreation	1.1
60	6	Developed Recreation	6	Developed Recreation	2.5
61	6	Developed Recreation	7	Shoreline Access	2.3
62	4	Natural Resource Conservation	4	Natural Resource Conservation	1.6
62	6	Developed Recreation	4	Natural Resource Conservation	0.2
63	4	Natural Resource Conservation	3	Sensitive Resource Management	5.3
64	4	Natural Resource Conservation	4	Natural Resource Conservation	4.9
65	6	Developed Recreation	6	Developed Recreation	23.8
66	6	Developed Recreation	2	Project Operations	1.3
67	7	Shoreline Access	7	Shoreline Access	1.0
68	6	Developed Recreation	6	Developed Recreation	19.6
69	6	Developed Recreation	2	Project Operations	1.3
70	6	Developed	6	Developed	1.0

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Recreation		Recreation	
71	7	Shoreline Access	4	Natural Resource Conservation	0.3
72	6	Developed Recreation	6	Developed Recreation	9.1
73	6	Developed Recreation	2	Project Operations	2.5
74	7	Shoreline Access	7	Shoreline Access	0.8
75	5	Industrial	2	Project Operations	23.0
76	6	Developed Recreation	6	Developed Recreation	4.3
77	Not Planned		2	Project Operations	0.03
77	6	Developed Recreation	2	Project Operations	0.6
78	Not Planned		5	Industrial	0.4
78	6	Developed Recreation	5	Industrial	0.004
79	6	Developed Recreation	4	Natural Resource Conservation	19.0
80	6	Developed Recreation	3	Sensitive Resource Management	1.5
81	7	Shoreline Access	7	Shoreline Access	9.0
82	4	Natural Resource Conservation	4	Natural Resource Conservation	21.7
83	4	Natural Resource Conservation	7	Shoreline Access	0.2
84	4	Natural Resource Conservation	4	Natural Resource Conservation	9.9
85	6	Developed Recreation	6	Developed Recreation	3.7
86	6	Developed Recreation	2	Project Operations	1.3
87	7	Shoreline Access	7	Shoreline Access	0.6
88	2	Project Operations	2	Project Operations	1.9
89	4	Natural Resource Conservation	6	Developed Recreation	2.0
90	7	Shoreline Access	7	Shoreline Access	2.4
91	7	Shoreline Access	7	Shoreline Access	7.0
92	4	Natural Resource Conservation	4	Natural Resource Conservation	24.3
93	7	Shoreline Access	6	Developed Recreation	0.1
94	Not Planned		4	Natural Resource Conservation	0.02
94	Not Planned		4	Natural Resource Conservation	1.9
94	4	Natural Resource	4	Natural Resource	0.7

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Conservation		Conservation	
94	7	Shoreline Access	4	Natural Resource Conservation	2.0
95	Not Planned		2	Project Operations	0.3
95	7	Shoreline Access	2	Project Operations	0.1
96	7	Shoreline Access	7	Shoreline Access	1.4
97	7	Shoreline Access	5	Industrial	1.6
98	7	Shoreline Access	7	Shoreline Access	9.2
99	6	Developed Recreation	6	Developed Recreation	18.6
100	7	Shoreline Access	7	Shoreline Access	0.5
101	Not Planned		6	Developed Recreation	11.7
102	Not Planned		2	Project Operations	0.4
102	4	Natural Resource Conservation	2	Project Operations	0.3
102	6	Developed Recreation	2	Project Operations	2.1
103	6	Developed Recreation	6	Developed Recreation	13.2
104	4	Natural Resource Conservation	4	Natural Resource Conservation	3.8
105	7	Shoreline Access	7	Shoreline Access	5.2
106	4	Natural Resource Conservation	4	Natural Resource Conservation	17.2
107	6	Developed Recreation	6	Developed Recreation	29.1
108	4	Natural Resource Conservation	4	Natural Resource Conservation	17.9
109	7	Shoreline Access	7	Shoreline Access	1.7
110	4	Natural Resource Conservation	3	Sensitive Resource Management	2.8
111	6	Developed Recreation	6	Developed Recreation	76.8
112	4	Natural Resource Conservation	4	Natural Resource Conservation	53.2
112	6	Developed Recreation	4	Natural Resource Conservation	81.4
113	6	Developed Recreation	6	Developed Recreation	2.4
114	6	Developed Recreation	6	Developed Recreation	4.1
115	4	Natural Resource Conservation	6	Developed Recreation	1.2
116	2	Project Operations	2	Project Operations	5.1
117	7	Shoreline Access	7	Shoreline Access	0.4

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
118	6	Developed Recreation	6	Developed Recreation	0.6
119	6	Developed Recreation	2	Project Operations	0.2
120	6	Developed Recreation	6	Developed Recreation	33.5
121	2	Project Operations	2	Project Operations	2.9
121	6	Developed Recreation	2	Project Operations	3.7
122	6	Developed Recreation	6	Developed Recreation	28.6
123	7	Shoreline Access	4	Natural Resource Conservation	0.7
124	6	Developed Recreation	6	Developed Recreation	10.9
124	7	Shoreline Access	7	Shoreline Access	7.3
34a	7	Shoreline Access	4	Natural Resource Conservation	0.5
35a	Not Planned		4	Natural Resource Conservation	0.8
41a	Not Planned		7	Shoreline Access	0.7
41b	Not Planned		4	Natural Resource Conservation	0.3
90a	4	Natural Resource Conservation	4	Natural Resource Conservation	0.3

Table C-3. Great Falls Reservoir Land Allocations

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
1	2	Project Operations	2	Projection Operations	19.0
2	6	Developed Recreation	6	Developed Recreation	343.4

Table C-4. Kentucky Reservoir Land Allocations

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
1	4	Natural Resource Conservation	4	Natural Resource Conservation	129.7
2	2	Project Operations	2	Project Operations	559.7
3	2	Project Operations	2	Project Operations	111.7
3	5	Industrial	2	Project Operations	10.0
4	4	Natural Resource Conservation	5	Industrial	258.2
4	5	Industrial	5	Industrial	170.2
5	2	Project Operations	6	Developed Recreation	2.5
5	5	Industrial	6	Developed Recreation	3.1
5	6	Developed Recreation	6	Developed Recreation	14.3
6	4	Natural Resource Conservation	4	Natural Resource Conservation	21.4
7	5	Industrial	2	Project Operations	15.9
8	4	Natural Resource Conservation	4	Natural Resource Conservation	150.4
9	4	Natural Resource Conservation	2	Project Operations	3.6
10	4	Natural Resource Conservation	7	Shoreline Access	0.1
10	7	Shoreline Access	7	Shoreline Access	49.6
11	4	Natural Resource Conservation	4	Natural Resource Conservation	53.9
12	4	Natural Resource Conservation	7	Shoreline Access	3.7
12	7	Shoreline Access	7	Shoreline Access	23.6
13	4	Natural Resource Conservation	6	Developed Recreation	3.6
14	4	Natural Resource Conservation	7	Shoreline Access	6.7
14	7	Shoreline Access	7	Shoreline Access	146.4
15	7	Shoreline Access	6	Developed Recreation	4.4
16	4	Natural Resource Conservation	7	Shoreline Access	0.2
16	7	Shoreline Access	7	Shoreline Access	70.6
17	3	Sensitive Resource Management	3	Sensitive Resource Management	21.3
18	7	Shoreline Access	6	Developed Recreation	1.4
19	4	Natural Resource Conservation	4	Natural Resource Conservation	3.4

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
20	4	Natural Resource Conservation	7	Shoreline Access	0.1
20	7	Shoreline Access	7	Shoreline Access	52.0
21	4	Natural Resource Conservation	4	Natural Resource Conservation	7.3
22	7	Shoreline Access	7	Shoreline Access	0.8
23	4	Natural Resource Conservation	6	Developed Recreation	0.8
23	7	Shoreline Access	6	Developed Recreation	1.2
24	4	Natural Resource Conservation	7	Shoreline Access	8.6
24	7	Shoreline Access	7	Shoreline Access	14.3
25	4	Natural Resource Conservation	4	Natural Resource Conservation	25.4
26	4	Natural Resource Conservation	7	Shoreline Access	24.9
26	7	Shoreline Access	7	Shoreline Access	4.2
27	4	Natural Resource Conservation	4	Natural Resource Conservation	4.4
28	4	Natural Resource Conservation	7	Shoreline Access	0.2
28	7	Shoreline Access	7	Shoreline Access	12.8
29	4	Natural Resource Conservation	4	Natural Resource Conservation	65.2
30	4	Natural Resource Conservation	7	Shoreline Access	1.8
30	7	Shoreline Access	7	Shoreline Access	16.9
31	4	Natural Resource Conservation	4	Natural Resource Conservation	4.1
32	4	Natural Resource Conservation	7	Shoreline Access	1.3
32	7	Shoreline Access	7	Shoreline Access	35.7
33	4	Natural Resource Conservation	4	Natural Resource Conservation	2.7
34	4	Natural Resource Conservation	7	Shoreline Access	21.8
34	7	Shoreline Access	7	Shoreline Access	7.2
35	4	Natural Resource Conservation	3	Sensitive Resource Management	43.2
36	4	Natural Resource Conservation	4	Natural Resource Conservation	143.7
36	5	Industrial	4	Natural Resource Conservation	17.0
37	4	Natural Resource Conservation	5	Industrial	44.3
38	4	Natural Resource	4	Natural Resource	83.1

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Conservation		Conservation	
39	4	Natural Resource Conservation	6	Developed Recreation	71.4
40	4	Natural Resource Conservation	7	Shoreline Access	0.4
40	7	Shoreline Access	7	Shoreline Access	11.1
41	4	Natural Resource Conservation	2	Project Operations	1.1
41	5	Industrial	2	Project Operations	3.0
42	4	Natural Resource Conservation	4	Natural Resource Conservation	5.5
42	7	Shoreline Access	4	Natural Resource Conservation	7.2
43	7	Shoreline Access	6	Developed Recreation	5.9
44	6	Developed Recreation	2	Project Operations	61.4
45	7	Shoreline Access	7	Shoreline Access	12.3
46	4	Natural Resource Conservation	4	Natural Resource Conservation	59.4
46	7	Shoreline Access	4	Natural Resource Conservation	1.3
47	6	Developed Recreation	6	Developed Recreation	54.5
48	4	Natural Resource Conservation	4	Natural Resource Conservation	82.0
49	4	Natural Resource Conservation	3	Sensitive Resource Management	21.9
50	4	Natural Resource Conservation	4	Natural Resource Conservation	304.5
51	4	Natural Resource Conservation	7	Shoreline Access	3.4
51	7	Shoreline Access	7	Shoreline Access	22.0
52	4	Natural Resource Conservation	4	Natural Resource Conservation	6.2
53	4	Natural Resource Conservation	6	Developed Recreation	7.2
54	4	Natural Resource Conservation	7	Shoreline Access	4.6
54	7	Shoreline Access	7	Shoreline Access	30.7
55	4	Natural Resource Conservation	4	Natural Resource Conservation	6.7
56	4	Natural Resource Conservation	3	Sensitive Resource Management	72.0
56	7	Shoreline Access	3	Sensitive Resource Management	31.7

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
57	4	Natural Resource Conservation	4	Natural Resource Conservation	40.7
58	4	Natural Resource Conservation	7	Shoreline Access	30.9
58	7	Shoreline Access	7	Shoreline Access	5.2
59	4	Natural Resource Conservation	3	Sensitive Resource Management	8.0
60	4	Natural Resource Conservation	7	Shoreline Access	2.0
60	7	Shoreline Access	7	Shoreline Access	69.9
61	4	Natural Resource Conservation	4	Natural Resource Conservation	16.6
61	7	Shoreline Access	4	Natural Resource Conservation	0.2
62	4	Natural Resource Conservation	7	Shoreline Access	3.8
62	7	Shoreline Access	7	Shoreline Access	3.5
63	4	Natural Resource Conservation	4	Natural Resource Conservation	11.6
64	4	Natural Resource Conservation	7	Shoreline Access	3.2
64	7	Shoreline Access	7	Shoreline Access	75.3
65	4	Natural Resource Conservation	3	Sensitive Resource Management	19.5
66	4	Natural Resource Conservation	4	Natural Resource Conservation	24.9
67	7	Shoreline Access	7	Shoreline Access	3.1
68	4	Natural Resource Conservation	7	Shoreline Access	0.5
68	7	Shoreline Access	7	Shoreline Access	102.8
69	4	Natural Resource Conservation	4	Natural Resource Conservation	1.6
70	4	Natural Resource Conservation	4	Natural Resource Conservation	13.7
71	7	Shoreline Access	7	Shoreline Access	13.3
72	6	Developed Recreation	6	Developed Recreation	21.0
73	6	Developed Recreation	7	Shoreline Access	1.7
73	7	Shoreline Access	7	Shoreline Access	68.0
74	7	Shoreline Access	6	Developed Recreation	11.2
75	4	Natural Resource Conservation	7	Shoreline Access	76.2
75	7	Shoreline Access	7	Shoreline Access	18.7

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
76	4	Natural Resource Conservation	4	Natural Resource Conservation	11.5
77	4	Natural Resource Conservation	4	Natural Resource Conservation	31.1
77	7	Shoreline Access	4	Natural Resource Conservation	1.5
78	4	Natural Resource Conservation	7	Shoreline Access	0.9
78	7	Shoreline Access	7	Shoreline Access	104.5
79	4	Natural Resource Conservation	4	Natural Resource Conservation	28.2
80	4	Natural Resource Conservation	7	Shoreline Access	0.4
80	7	Shoreline Access	7	Shoreline Access	65.6
81	4	Natural Resource Conservation	4	Natural Resource Conservation	915.4
81	6	Developed Recreation	4	Natural Resource Conservation	117.8
82	4	Natural Resource Conservation	6	Developed Recreation	0.2
82	6	Developed Recreation	6	Developed Recreation	27.0
83	4	Natural Resource Conservation	3	Sensitive Resource Management	10.0
84	4	Natural Resource Conservation	7	Shoreline Access	51.4
84	7	Shoreline Access	7	Shoreline Access	89.7
85	4	Natural Resource Conservation	4	Natural Resource Conservation	31.1
86	4	Natural Resource Conservation	4	Natural Resource Conservation	0.5
87	4	Natural Resource Conservation	5	Industrial	5.0
87	5	Industrial	5	Industrial	42.9
87	7	Shoreline Access	5	Industrial	107.6
88	4	Natural Resource Conservation	4	Natural Resource Conservation	175.7
89	4	Natural Resource Conservation	3	Sensitive Resource Management	409.3
90	3	Sensitive Resource Management	6	Developed Recreation	251.1
90	4	Natural Resource Conservation	6	Developed Recreation	247.5
90	6	Developed Recreation	6	Developed Recreation	27.3
91	4	Natural Resource	4	Natural Resource	0.1

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Conservation		Conservation	
92	5	Industrial	2	Project Operations	4.7
93	6	Developed Recreation	6	Developed Recreation	3.5
94	7	Shoreline Access	7	Shoreline Access	18.7
95	4	Natural Resource Conservation	6	Developed Recreation	0.2
95	6	Developed Recreation	6	Developed Recreation	35.7
96	4	Natural Resource Conservation	4	Natural Resource Conservation	43.0
97	4	Natural Resource Conservation	5	Industrial	191.4
97	5	Industrial	5	Industrial	379.6
98	2	Project Operations	2	Project Operations	42.9
99	3	Sensitive Resource Management	3	Sensitive Resource Management	33.4
99	5	Industrial	3	Sensitive Resource Management	0.8
100	4	Natural Resource Conservation	2	Project Operations	92.4
101	4	Natural Resource Conservation	4	Natural Resource Conservation	23758.3
102	3	Sensitive Resource Management	3	Sensitive Resource Management	486.8
103	6	Developed Recreation	6	Developed Recreation	5.5
104	3	Sensitive Resource Management	2	Project Operations	0.6
105	3	Sensitive Resource Management	7	Shoreline Access	12.7
106	4	Natural Resource Conservation	7	Shoreline Access	2.1
107	3	Sensitive Resource Management	7	Shoreline Access	25.7
108	3	Sensitive Resource Management	7	Shoreline Access	11.9
109	4	Natural Resource Conservation	4	Natural Resource Conservation	129.1
110	2	Project Operations	2	Project Operations	2.9
111	2	Project Operations	4	Natural Resource Conservation	9.8

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
111	4	Natural Resource Conservation	4	Natural Resource Conservation	18.3
112	4	Natural Resource Conservation	4	Natural Resource Conservation	11.4
113	4	Natural Resource Conservation	4	Natural Resource Conservation	27.6
114	2	Project Operations	2	Project Operations	1.3
115	4	Natural Resource Conservation	3	Sensitive Resource Management	48.0
116	4	Natural Resource Conservation	4	Natural Resource Conservation	27.1
117	6	Developed Recreation	6	Developed Recreation	5.1
118	4	Natural Resource Conservation	4	Natural Resource Conservation	84.7
119	4	Natural Resource Conservation	7	Shoreline Access	10.4
120	4	Natural Resource Conservation	4	Natural Resource Conservation	2.5
121	4	Natural Resource Conservation	6	Developed Recreation	4.3
121	6	Developed Recreation	6	Developed Recreation	1186.8
122	4	Natural Resource Conservation	4	Natural Resource Conservation	23.1
123	4	Natural Resource Conservation	3	Sensitive Resource Management	0.4
124	4	Natural Resource Conservation	2	Project Operations	0.4
125	4	Natural Resource Conservation	7	Shoreline Access	5.2
125	7	Shoreline Access	7	Shoreline Access	10.5
126	4	Natural Resource Conservation	6	Developed Recreation	0.6
126	6	Developed Recreation	6	Developed Recreation	38.2
127	4	Natural Resource Conservation	2	Project Operations	0.5
128	4	Natural Resource Conservation	3	Sensitive Resource Management	732.7
129	4	Natural Resource Conservation	2	Project Operations	7.6
129	5	Industrial	2	Project Operations	5.5
130	4	Natural Resource Conservation	5	Industrial	0.8
130	5	Industrial	5	Industrial	19.7

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
131	4	Natural Resource Conservation	3	Sensitive Resource Management	99.5
132	4	Natural Resource Conservation	4	Natural Resource Conservation	29.4
133	2	Project Operations	2	Project Operations	33.1
133	4	Natural Resource Conservation	2	Project Operations	8.6
134	4	Natural Resource Conservation	6	Developed Recreation	5.3
134	5	Industrial	6	Developed Recreation	6.4
134	6	Developed Recreation	6	Developed Recreation	2.1
135	5	Industrial	4	Natural Resource Conservation	10.4
136	5	Industrial	3	Sensitive Resource Management	87.4
137	5	Industrial	2	Project Operations	0.7
138	4	Natural Resource Conservation	4	Natural Resource Conservation	64.9
138	5	Industrial	4	Natural Resource Conservation	181.8
139	4	Natural Resource Conservation	5	Industrial	701.4
140	4	Natural Resource Conservation	3	Sensitive Resource Management	264.4
141	4	Natural Resource Conservation	4	Natural Resource Conservation	415.6
142	6	Developed Recreation	6	Developed Recreation	6.3
143	6	Developed Recreation	6	Developed Recreation	24.0
144	4	Natural Resource Conservation	4	Natural Resource Conservation	453.9
145	4	Natural Resource Conservation	7	Shoreline Access	15.6
146	4	Natural Resource Conservation	4	Natural Resource Conservation	11.7
147	2	Project Operations	2	Project Operations	1.7
148	4	Natural Resource Conservation	4	Natural Resource Conservation	11.6
148	5	Industrial	4	Natural Resource Conservation	1.9
149	5	Industrial	2	Project Operations	1.1
150	4	Natural Resource Conservation	4	Natural Resource Conservation	62.9

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
151	4	Natural Resource Conservation	4	Natural Resource Conservation	7.2
152	4	Natural Resource Conservation	4	Natural Resource Conservation	62.2
153	5	Industrial	2	Project Operations	7.1
154	4	Natural Resource Conservation	4	Natural Resource Conservation	3.7
155	4	Natural Resource Conservation	4	Natural Resource Conservation	8.7
156	6	Developed Recreation	6	Developed Recreation	22.6
157	4	Natural Resource Conservation	4	Natural Resource Conservation	9.0
158	6	Developed Recreation	6	Developed Recreation	1.9
159	6	Developed Recreation	6	Developed Recreation	39.2
160	4	Natural Resource Conservation	4	Natural Resource Conservation	16.2
161	4	Natural Resource Conservation	4	Natural Resource Conservation	2.2
162	4	Natural Resource Conservation	4	Natural Resource Conservation	46.8
163	5	Industrial	2	Project Operations	4.6
164	4	Natural Resource Conservation	3	Sensitive Resource Management	53.5
165	4	Natural Resource Conservation	4	Natural Resource Conservation	12.2
166	4	Natural Resource Conservation	2	Project Operations	2.5
167	6	Developed Recreation	6	Developed Recreation	7.4
168	4	Natural Resource Conservation	4	Natural Resource Conservation	14.5
169	5	Industrial	2	Project Operations	1.2
170	4	Natural Resource Conservation	4	Natural Resource Conservation	0.7
171	4	Natural Resource Conservation	4	Natural Resource Conservation	35.8
172	4	Natural Resource Conservation	2	Project Operations	1.8
173	4	Natural Resource Conservation	6	Developed Recreation	8.3
174	4	Natural Resource Conservation	4	Natural Resource Conservation	26.2
175	5	Industrial	4	Natural Resource Conservation	3.1
176	5	Industrial	5	Industrial	3.6

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
177	5	Industrial	4	Natural Resource Conservation	19.8
178	5	Industrial	2	Project Operations	0.6
179	3	Sensitive Resource Management	3	Sensitive Resource Management	21.2
180	4	Natural Resource Conservation	6	Developed Recreation	15.4
181	4	Natural Resource Conservation	2	Project Operations	0.6
182	4	Natural Resource Conservation	4	Natural Resource Conservation	11.8
183	4	Natural Resource Conservation	4	Natural Resource Conservation	22.5
184	4	Natural Resource Conservation	7	Shoreline Access	2.1
185	4	Natural Resource Conservation	4	Natural Resource Conservation	7.7
186	4	Natural Resource Conservation	3	Sensitive Resource Management	6.1
187	4	Natural Resource Conservation	2	Project Operations	0.7
188	4	Natural Resource Conservation	4	Natural Resource Conservation	44.5
189	4	Natural Resource Conservation	7	Shoreline Access	7.9
190	5	Industrial	3	Sensitive Resource Management	2.6
191	4	Natural Resource Conservation	4	Natural Resource Conservation	4.3
192	4	Natural Resource Conservation	4	Natural Resource Conservation	164.3
193	4	Natural Resource Conservation	6	Developed Recreation	2.5
194	4	Natural Resource Conservation	4	Natural Resource Conservation	44.5
195	4	Natural Resource Conservation	4	Natural Resource Conservation	0.9
196	6	Developed Recreation	4	Natural Resource Conservation	3.4
197	4	Natural Resource Conservation	4	Natural Resource Conservation	29.9
198	2	Project Operations	2	Project Operations	0.8
199	6	Developed Recreation	4	Natural Resource Conservation	2.6
200	4	Natural Resource Conservation	4	Natural Resource Conservation	22.2

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
201	4	Natural Resource Conservation	4	Natural Resource Conservation	2.0
202	4	Natural Resource Conservation	3	Sensitive Resource Management	218.4
203	4	Natural Resource Conservation	4	Natural Resource Conservation	17.5
204	5	Industrial	4	Natural Resource Conservation	39.6
205	5	Industrial	2	Project Operations	4.6
206	4	Natural Resource Conservation	4	Natural Resource Conservation	668.8
207	4	Natural Resource Conservation	2	Project Operations	1.4
208	4	Natural Resource Conservation	6	Developed Recreation	25.8
209	4	Natural Resource Conservation	4	Natural Resource Conservation	16.9
210	4	Natural Resource Conservation	4	Natural Resource Conservation	23.7
211	4	Natural Resource Conservation	2	Project Operations	2.4
212	4	Natural Resource Conservation	4	Natural Resource Conservation	52.4
213	5	Industrial	2	Project Operations	3.9
214	4	Natural Resource Conservation	4	Natural Resource Conservation	2.0
215	4	Natural Resource Conservation	4	Natural Resource Conservation	21.6
216	4	Natural Resource Conservation	4	Natural Resource Conservation	33.5
217	4	Natural Resource Conservation	2	Project Operations	1.6
218	4	Natural Resource Conservation	4	Natural Resource Conservation	77.9
219	4	Natural Resource Conservation	2	Project Operations	2.9
220	4	Natural Resource Conservation	4	Natural Resource Conservation	19.6
221	4	Natural Resource Conservation	2	Project Operations	0.9
222	4	Natural Resource Conservation	6	Developed Recreation	1.9
223	4	Natural Resource Conservation	5	Industrial	5.5
224	4	Natural Resource Conservation	4	Natural Resource Conservation	135.5
225	6	Developed Recreation	6	Developed Recreation	13.1

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
226	3	Sensitive Resource Management	3	Sensitive Resource Management	12.0
226	5	Industrial	3	Sensitive Resource Management	1.9
226	6	Developed Recreation	3	Sensitive Resource Management	2.3
227	3	Sensitive Resource Management	2	Project Operations	0.8
228	5	Industrial	5	Industrial	4.6
229	4	Natural Resource Conservation	4	Natural Resource Conservation	0.1
229	6	Developed Recreation	4	Natural Resource Conservation	2.4
230	5	Industrial	6	Developed Recreation	2.1
230	6	Developed Recreation	6	Developed Recreation	29.6
231	4	Natural Resource Conservation	4	Natural Resource Conservation	35.4
232	5	Industrial	5	Industrial	1.6
233	7	Shoreline Access	7	Shoreline Access	1.9
234	4	Natural Resource Conservation	3	Sensitive Resource Management	54.5
235	4	Natural Resource Conservation	6	Developed Recreation	18.1
236	4	Natural Resource Conservation	2	Project Operations	1.7
237	4	Natural Resource Conservation	4	Natural Resource Conservation	133.4
238	4	Natural Resource Conservation	7	Shoreline Access	24.8
238	7	Shoreline Access	7	Shoreline Access	24.0
239	4	Natural Resource Conservation	7	Shoreline Access	11.1
240	4	Natural Resource Conservation	4	Natural Resource Conservation	82.3
241	4	Natural Resource Conservation	7	Shoreline Access	39.2
241	7	Shoreline Access	7	Shoreline Access	51.8
242	6	Developed Recreation	6	Developed Recreation	4.7
243	4	Natural Resource Conservation	7	Shoreline Access	0.2
243	7	Shoreline Access	7	Shoreline Access	6.8

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
244	4	Natural Resource Conservation	4	Natural Resource Conservation	6.3
245	4	Natural Resource Conservation	4	Natural Resource Conservation	53.5
246	4	Natural Resource Conservation	3	Sensitive Resource Management	6.0
247	4	Natural Resource Conservation	4	Natural Resource Conservation	133.8
248	4	Natural Resource Conservation	4	Natural Resource Conservation	2.9
249	4	Natural Resource Conservation	6	Developed Recreation	20.8
249	6	Developed Recreation	6	Developed Recreation	35.6
250	5	Industrial	2	Project Operations	3.9
251	4	Natural Resource Conservation	7	Shoreline Access	42.8
251	7	Shoreline Access	7	Shoreline Access	22.3
252	4	Natural Resource Conservation	4	Natural Resource Conservation	54.0
253	4	Natural Resource Conservation	3	Sensitive Resource Management	225.4
254	4	Natural Resource Conservation	7	Shoreline Access	11.6
255	4	Natural Resource Conservation	4	Natural Resource Conservation	112.5
256	4	Natural Resource Conservation	7	Shoreline Access	108.9
257	4	Natural Resource Conservation	7	Shoreline Access	7.9
257	7	Shoreline Access	7	Shoreline Access	24.6
258	4	Natural Resource Conservation	4	Natural Resource Conservation	7.6
259	4	Natural Resource Conservation	6	Developed Recreation	9.2
259	7	Shoreline Access	6	Developed Recreation	52.0
260	4	Natural Resource Conservation	7	Shoreline Access	2.4
260	7	Shoreline Access	7	Shoreline Access	25.6
261	4	Natural Resource Conservation	4	Natural Resource Conservation	0.04
262	7	Shoreline Access	6	Developed Recreation	3.5
263	4	Natural Resource Conservation	7	Shoreline Access	0.1
263	7	Shoreline Access	7	Shoreline Access	11.0

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
264	4	Natural Resource Conservation	3	Sensitive Resource Management	9.3
265	4	Natural Resource Conservation	3	Sensitive Resource Management	3.7
266	4	Natural Resource Conservation	4	Natural Resource Conservation	3633.3
267	2	Project Operations	2	Project Operations	3.9
267	4	Natural Resource Conservation	2	Project Operations	67.0
268	4	Natural Resource Conservation	6	Developed Recreation	2.2
269	4	Natural Resource Conservation	7	Shoreline Access	7.1
270	4	Natural Resource Conservation	7	Shoreline Access	25.8
271	4	Natural Resource Conservation	5	Industrial	4.3
271	5	Industrial	5	Industrial	83.1
271	6	Developed Recreation	5	Industrial	0.5
272	4	Natural Resource Conservation	7	Shoreline Access	32.3
273	4	Natural Resource Conservation	4	Natural Resource Conservation	447.7
273	7	Shoreline Access	4	Natural Resource Conservation	0.7
274	5	Industrial	2	Project Operations	9.2
275	4	Natural Resource Conservation	7	Shoreline Access	2.0
276	4	Natural Resource Conservation	3	Sensitive Resource Management	119.8
277	4	Natural Resource Conservation	7	Shoreline Access	4.7
277	7	Shoreline Access	7	Shoreline Access	79.5
278	4	Natural Resource Conservation	4	Natural Resource Conservation	18.5
279	4	Natural Resource Conservation	6	Developed Recreation	2.3
280	4	Natural Resource Conservation	4	Natural Resource Conservation	214.0
281	5	Industrial	2	Project Operations	5.0
282	7	Shoreline Access	7	Shoreline Access	7.5
283	4	Natural Resource Conservation	4	Natural Resource Conservation	8.9
284	7	Shoreline Access	7	Shoreline Access	23.4

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
285	7	Shoreline Access	6	Developed Recreation	0.8
286	6	Developed Recreation	6	Developed Recreation	2.2
287	4	Natural Resource Conservation	4	Natural Resource Conservation	24.9
288	4	Natural Resource Conservation	7	Shoreline Access	17.9
288	7	Shoreline Access	7	Shoreline Access	69.4
289	4	Natural Resource Conservation	4	Natural Resource Conservation	11.9
289	7	Shoreline Access	4	Natural Resource Conservation	5.1
290	4	Natural Resource Conservation	6	Developed Recreation	0.1
290	6	Developed Recreation	6	Developed Recreation	48.6
291	4	Natural Resource Conservation	4	Natural Resource Conservation	0.9
292	4	Natural Resource Conservation	3	Sensitive Resource Management	0.3
293	4	Natural Resource Conservation	4	Natural Resource Conservation	4.8
294	6	Developed Recreation	6	Developed Recreation	4.4
295	4	Natural Resource Conservation	7	Shoreline Access	55.2
295	7	Shoreline Access	7	Shoreline Access	24.6
296	4	Natural Resource Conservation	6	Developed Recreation	2.6
296	7	Shoreline Access	6	Developed Recreation	67.8
297	7	Shoreline Access	7	Shoreline Access	97.0
298	4	Natural Resource Conservation	4	Natural Resource Conservation	331.6
299	4	Natural Resource Conservation	3	Sensitive Resource Management	122.4
300	7	Shoreline Access	7	Shoreline Access	12.0
301	4	Natural Resource Conservation	4	Natural Resource Conservation	2601.8
301	6	Developed Recreation	4	Natural Resource Conservation	15.5
302	4	Natural Resource Conservation	6	Developed Recreation	16.7
302	6	Developed Recreation	6	Developed Recreation	14.7
303	4	Natural Resource	7	Shoreline Access	0.3

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Conservation			
303	7	Shoreline Access	7	Shoreline Access	63.9
304	4	Natural Resource Conservation	4	Natural Resource Conservation	10.0
305	4	Natural Resource Conservation	6	Developed Recreation	15.1
305	6	Developed Recreation	6	Developed Recreation	5.9
306	7	Shoreline Access	7	Shoreline Access	26.9
307	4	Natural Resource Conservation	4	Natural Resource Conservation	0.7
308	4	Natural Resource Conservation	2	Project Operations	7.9
309	7	Shoreline Access	7	Shoreline Access	25.4
310	4	Natural Resource Conservation	3	Sensitive Resource Management	8.9
311	4	Natural Resource Conservation	4	Natural Resource Conservation	475.6
312	4	Natural Resource Conservation	7	Shoreline Access	3.8
313	4	Natural Resource Conservation	3	Sensitive Resource Management	69.9
314	4	Natural Resource Conservation	4	Natural Resource Conservation	47.3
315	6	Developed Recreation	6	Developed Recreation	11.0
316	4	Natural Resource Conservation	7	Shoreline Access	9.4
317	4	Natural Resource Conservation	6	Developed Recreation	6.0
317	6	Developed Recreation	6	Developed Recreation	9.1
318	4	Natural Resource Conservation	4	Natural Resource Conservation	185.4
319	4	Natural Resource Conservation	6	Developed Recreation	2.9
319	6	Developed Recreation	6	Developed Recreation	8.7
320	7	Shoreline Access	7	Shoreline Access	10.8
321	4	Natural Resource Conservation	4	Natural Resource Conservation	2.9
322	4	Natural Resource Conservation	7	Shoreline Access	0.7
322	7	Shoreline Access	7	Shoreline Access	11.1
323	4	Natural Resource Conservation	3	Sensitive Resource Management	25.5

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
324	4	Natural Resource Conservation	3	Sensitive Resource Management	12.5
325	4	Natural Resource Conservation	7	Shoreline Access	0.1
325	7	Shoreline Access	7	Shoreline Access	60.1
326	4	Natural Resource Conservation	6	Developed Recreation	15.5
326	7	Shoreline Access	6	Developed Recreation	8.0
327	4	Natural Resource Conservation	3	Sensitive Resource Management	23.2
328	4	Natural Resource Conservation	7	Shoreline Access	5.4
328	7	Shoreline Access	7	Shoreline Access	10.9
329	4	Natural Resource Conservation	4	Natural Resource Conservation	48.8
330	4	Natural Resource Conservation	7	Shoreline Access	52.4
331	6	Developed Recreation	6	Developed Recreation	4.4
332	4	Natural Resource Conservation	4	Natural Resource Conservation	203.1
333	4	Natural Resource Conservation	7	Shoreline Access	0.3
333	7	Shoreline Access	7	Shoreline Access	39.8
334	4	Natural Resource Conservation	4	Natural Resource Conservation	3.3
335	4	Natural Resource Conservation	3	Sensitive Resource Management	1.7
336	7	Shoreline Access	6	Developed Recreation	3.0
337	4	Natural Resource Conservation	7	Shoreline Access	19.5
337	7	Shoreline Access	7	Shoreline Access	39.2
338	6	Developed Recreation	6	Developed Recreation	8.8
339	4	Natural Resource Conservation	4	Natural Resource Conservation	113.5
340	4	Natural Resource Conservation	4	Natural Resource Conservation	4.9
341	4	Natural Resource Conservation	7	Shoreline Access	27.8
341	7	Shoreline Access	7	Shoreline Access	23.3
342	4	Natural Resource Conservation	4	Natural Resource Conservation	1.2
343	4	Natural Resource	4	Natural Resource	14.3

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Conservation		Conservation	
344	7	Shoreline Access	7	Shoreline Access	17.8
345	4	Natural Resource Conservation	4	Natural Resource Conservation	99.1
346	4	Natural Resource Conservation	7	Shoreline Access	11.7
347	4	Natural Resource Conservation	6	Developed Recreation	36.9
348	2	Project Operations	2	Project Operations	3.3
349	4	Natural Resource Conservation	4	Natural Resource Conservation	10.8
350	4	Natural Resource Conservation	4	Natural Resource Conservation	13.0
351	4	Natural Resource Conservation	2	Project Operations	35.2
352	4	Natural Resource Conservation	6	Developed Recreation	1.2
353	4	Natural Resource Conservation	2	Project Operations	10.9
354	4	Natural Resource Conservation	4	Natural Resource Conservation	3023.8
355	4	Natural Resource Conservation	7	Shoreline Access	22.0
356	4	Natural Resource Conservation	7	Shoreline Access	11.7
357	4	Natural Resource Conservation	3	Sensitive Resource Management	23.6
358	4	Natural Resource Conservation	4	Natural Resource Conservation	40.6
359	4	Natural Resource Conservation	3	Sensitive Resource Management	14.5
360	4	Natural Resource Conservation	7	Shoreline Access	5.9
361	4	Natural Resource Conservation	4	Natural Resource Conservation	17.8
362	6	Developed Recreation	6	Developed Recreation	15.3
363	4	Natural Resource Conservation	4	Natural Resource Conservation	21.9
364	4	Natural Resource Conservation	3	Sensitive Resource Management	85.0
365	4	Natural Resource Conservation	4	Natural Resource Conservation	46.2
366	7	Shoreline Access	7	Shoreline Access	0.3
367	6	Developed Recreation	6	Developed Recreation	5.6

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
368	4	Natural Resource Conservation	7	Shoreline Access	16.3
368	7	Shoreline Access	7	Shoreline Access	35.5
369	4	Natural Resource Conservation	4	Natural Resource Conservation	14.5
370	4	Natural Resource Conservation	7	Shoreline Access	3.2
371	4	Natural Resource Conservation	4	Natural Resource Conservation	24.0
371	6	Developed Recreation	4	Natural Resource Conservation	12.4
372	6	Developed Recreation	7	Shoreline Access	1.4
373	6	Developed Recreation	6	Developed Recreation	4.4
374	4	Natural Resource Conservation	2	Project Operations	6.0
375	4	Natural Resource Conservation	4	Natural Resource Conservation	6360.6
375	5	Industrial	4	Natural Resource Conservation	24.2
375	6	Developed Recreation	4	Natural Resource Conservation	0.1
376	4	Natural Resource Conservation	2	Project Operations	26.2
377	2	Project Operations	2	Project Operations	1.8
378	4	Natural Resource Conservation	7	Shoreline Access	11.4
379	4	Natural Resource Conservation	3	Sensitive Resource Management	67.8
380	4	Natural Resource Conservation	2	Project Operations	16.1
381	4	Natural Resource Conservation	7	Shoreline Access	8.7
382	4	Natural Resource Conservation	4	Natural Resource Conservation	26.2
383	6	Developed Recreation	5	Industrial	28.3
384	4	Natural Resource Conservation	6	Developed Recreation	48.6
385	4	Natural Resource Conservation	4	Natural Resource Conservation	56.5
386	6	Developed Recreation	6	Developed Recreation	39.0
387	4	Natural Resource Conservation	7	Shoreline Access	1.9
387	7	Shoreline Access	7	Shoreline Access	6.0
388	4	Natural Resource	4	Natural Resource	243.7

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Conservation		Conservation	
389	5	Industrial	2	Project Operations	24.4
390	4	Natural Resource Conservation	7	Shoreline Access	3.7
391	4	Natural Resource Conservation	7	Shoreline Access	39.2
392	4	Natural Resource Conservation	7	Shoreline Access	45.5
392	6	Developed Recreation	7	Shoreline Access	4.1
393	6	Developed Recreation	6	Developed Recreation	2.6
394	6	Developed Recreation	7	Shoreline Access	0.4
394	7	Shoreline Access	7	Shoreline Access	24.1
395	6	Developed Recreation	6	Developed Recreation	3.4
396	6	Developed Recreation	6	Developed Recreation	1.4
397	6	Developed Recreation	6	Developed Recreation	14.1
398	4	Natural Resource Conservation	4	Natural Resource Conservation	77.8
398	5	Industrial	4	Natural Resource Conservation	5.2
399	4	Natural Resource Conservation	7	Shoreline Access	14.4
399	5	Industrial	7	Shoreline Access	1.6
400	2	Project Operations	6	Developed Recreation	10.4
400	6	Developed Recreation	6	Developed Recreation	282.3
401	6	Developed Recreation	2	Project Operations	4.4
402	4	Natural Resource Conservation	7	Shoreline Access	0.8
402	7	Shoreline Access	7	Shoreline Access	17.1
403	4	Natural Resource Conservation	6	Developed Recreation	1.2
404	4	Natural Resource Conservation	4	Natural Resource Conservation	34.3
405	6	Developed Recreation	6	Developed Recreation	14.1
406	4	Natural Resource Conservation	4	Natural Resource Conservation	162.1
407	7	Shoreline Access	7	Shoreline Access	14.5
408	4	Natural Resource Conservation	4	Natural Resource Conservation	10.1

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
409	4	Natural Resource Conservation	7	Shoreline Access	8.0
409	7	Shoreline Access	7	Shoreline Access	32.6
410	4	Natural Resource Conservation	6	Developed Recreation	0.8
410	6	Developed Recreation	6	Developed Recreation	8.3
411	4	Natural Resource Conservation	4	Natural Resource Conservation	18.5
412	4	Natural Resource Conservation	7	Shoreline Access	5.3
412	7	Shoreline Access	7	Shoreline Access	34.7
413	6	Developed Recreation	6	Developed Recreation	2.2
414	4	Natural Resource Conservation	4	Natural Resource Conservation	10.2
415	4	Natural Resource Conservation	7	Shoreline Access	23.4
416	5	Industrial	2	Project Operations	1.0
417	4	Natural Resource Conservation	4	Natural Resource Conservation	31.1
418	4	Natural Resource Conservation	7	Shoreline Access	8.4
418	7	Shoreline Access	7	Shoreline Access	12.9
419	4	Natural Resource Conservation	4	Natural Resource Conservation	6.4
420	6	Developed Recreation	6	Developed Recreation	7.6
421	4	Natural Resource Conservation	7	Shoreline Access	1.5
421	7	Shoreline Access	7	Shoreline Access	10.7
422	6	Developed Recreation	6	Developed Recreation	3.0
422	7	Shoreline Access	6	Developed Recreation	15.5
423	6	Developed Recreation	4	Natural Resource Conservation	14.2
424	6	Developed Recreation	6	Developed Recreation	15.3
425	4	Natural Resource Conservation	4	Natural Resource Conservation	120.1
426	3	Sensitive Resource Management	3	Sensitive Resource Management	28.1
427	4	Natural Resource Conservation	4	Natural Resource Conservation	4.6
428	4	Natural Resource Conservation	4	Natural Resource Conservation	476.6

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
429	4	Natural Resource Conservation	6	Developed Recreation	3.2
430	4	Natural Resource Conservation	4	Natural Resource Conservation	46.7
431	4	Natural Resource Conservation	7	Shoreline Access	0.5
431	7	Shoreline Access	7	Shoreline Access	74.2
432	4	Natural Resource Conservation	4	Natural Resource Conservation	17.7
433	4	Natural Resource Conservation	7	Shoreline Access	3.7
433	7	Shoreline Access	7	Shoreline Access	27.0
434	4	Natural Resource Conservation	4	Natural Resource Conservation	51.7
434	7	Shoreline Access	4	Natural Resource Conservation	1.1
435	4	Natural Resource Conservation	7	Shoreline Access	3.2
435	7	Shoreline Access	7	Shoreline Access	32.3
436	4	Natural Resource Conservation	7	Shoreline Access	0.5
436	7	Shoreline Access	7	Shoreline Access	46.7
437	4	Natural Resource Conservation	6	Developed Recreation	6.2
438	4	Natural Resource Conservation	7	Shoreline Access	0.5
438	7	Shoreline Access	7	Shoreline Access	37.7
439	4	Natural Resource Conservation	4	Natural Resource Conservation	25.1
440	4	Natural Resource Conservation	7	Shoreline Access	56.1
441	4	Natural Resource Conservation	4	Natural Resource Conservation	17.2
442	4	Natural Resource Conservation	4	Natural Resource Conservation	851.4
443	4	Natural Resource Conservation	7	Shoreline Access	1.5
443	7	Shoreline Access	7	Shoreline Access	57.5
444	4	Natural Resource Conservation	4	Natural Resource Conservation	50.5
445	4	Natural Resource Conservation	7	Shoreline Access	14.7
445	7	Shoreline Access	7	Shoreline Access	13.2
446	3	Sensitive Resource Management	3	Sensitive Resource Management	189.9
446	4	Natural Resource Conservation	3	Sensitive Resource	881.8

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
				Management	
447	3	Sensitive Resource Management	7	Shoreline Access	6.3
447	4	Natural Resource Conservation	7	Shoreline Access	67.0
448	4	Natural Resource Conservation	7	Shoreline Access	13.2
448	7	Shoreline Access	7	Shoreline Access	66.7
449	4	Natural Resource Conservation	4	Natural Resource Conservation	5.0
450	4	Natural Resource Conservation	7	Shoreline Access	1.0
450	7	Shoreline Access	7	Shoreline Access	32.4
451	4	Natural Resource Conservation	4	Natural Resource Conservation	26.8
452	4	Natural Resource Conservation	7	Shoreline Access	0.8
452	7	Shoreline Access	7	Shoreline Access	79.3
453	7	Shoreline Access	6	Developed Recreation	5.7
454	4	Natural Resource Conservation	4	Natural Resource Conservation	1145.8
455	6	Developed Recreation	6	Developed Recreation	98.6
456	4	Natural Resource Conservation	7	Shoreline Access	5.3
456	7	Shoreline Access	7	Shoreline Access	10.7
457	4	Natural Resource Conservation	4	Natural Resource Conservation	75.8
458	4	Natural Resource Conservation	7	Shoreline Access	14.3
458	7	Shoreline Access	7	Shoreline Access	15.3
459	4	Natural Resource Conservation	4	Natural Resource Conservation	2.8
460	4	Natural Resource Conservation	6	Developed Recreation	3.1
460	7	Shoreline Access	6	Developed Recreation	1.5
461	4	Natural Resource Conservation	4	Natural Resource Conservation	356.3
461	6	Developed Recreation	4	Natural Resource Conservation	138.5
462	6	Developed Recreation	6	Developed Recreation	4.8
463	4	Natural Resource Conservation	7	Shoreline Access	5.3
464	7	Shoreline Access	6	Developed Recreation	10.5

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
465	4	Natural Resource Conservation	7	Shoreline Access	1.0
465	7	Shoreline Access	7	Shoreline Access	27.8
466	4	Natural Resource Conservation	4	Natural Resource Conservation	161.5
467	7	Shoreline Access	7	Shoreline Access	29.5
468	6	Developed Recreation	6	Developed Recreation	1.7
469	4	Natural Resource Conservation	4	Natural Resource Conservation	28.6
470	4	Natural Resource Conservation	7	Shoreline Access	0.7
470	7	Shoreline Access	7	Shoreline Access	10.6
471	4	Natural Resource Conservation	4	Natural Resource Conservation	11.8
472	4	Natural Resource Conservation	7	Shoreline Access	1.4
472	7	Shoreline Access	7	Shoreline Access	15.4
473	4	Natural Resource Conservation	4	Natural Resource Conservation	3.8
474	4	Natural Resource Conservation	4	Natural Resource Conservation	24.9
474	7	Shoreline Access	4	Natural Resource Conservation	0.6
475	4	Natural Resource Conservation	7	Shoreline Access	4.8
475	7	Shoreline Access	7	Shoreline Access	83.7
476	4	Natural Resource Conservation	4	Natural Resource Conservation	36.5
477	4	Natural Resource Conservation	7	Shoreline Access	30.4
477	7	Shoreline Access	7	Shoreline Access	10.2
478	4	Natural Resource Conservation	4	Natural Resource Conservation	33.6
479	5	Industrial	5	Industrial	24.0
479	7	Shoreline Access	5	Industrial	4.9
480	4	Natural Resource Conservation	4	Natural Resource Conservation	24.5
480	6	Developed Recreation	4	Natural Resource Conservation	47.0
481	6	Developed Recreation	6	Developed Recreation	1.3
482	6	Developed Recreation	6	Developed Recreation	287.5
483	4	Natural Resource Conservation	4	Natural Resource Conservation	38.2
484	4	Natural Resource Conservation	3	Sensitive Resource	23.2

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
				Management	
485	4	Natural Resource Conservation	7	Shoreline Access	23.2
485	6	Developed Recreation	7	Shoreline Access	11.9
485	7	Shoreline Access	7	Shoreline Access	10.7
486	4	Natural Resource Conservation	4	Natural Resource Conservation	34.5
487	7	Shoreline Access	6	Developed Recreation	13.2
488	4	Natural Resource Conservation	7	Shoreline Access	0.4
488	7	Shoreline Access	7	Shoreline Access	16.2
489	4	Natural Resource Conservation	4	Natural Resource Conservation	0.7
490	4	Natural Resource Conservation	7	Shoreline Access	0.2
490	7	Shoreline Access	7	Shoreline Access	4.4
491	6	Developed Recreation	6	Developed Recreation	6.0
492	5	Industrial	2	Project Operations	5.4
493	7	Shoreline Access	7	Shoreline Access	25.0
494	7	Shoreline Access	6	Developed Recreation	30.3
495	4	Natural Resource Conservation	7	Shoreline Access	5.4
496	4	Natural Resource Conservation	3	Sensitive Resource Management	30.0
497	4	Natural Resource Conservation	7	Shoreline Access	17.6
498	6	Developed Recreation	6	Developed Recreation	67.8
499	4	Natural Resource Conservation	4	Natural Resource Conservation	2.7
500	4	Natural Resource Conservation	7	Shoreline Access	1.3
500	7	Shoreline Access	7	Shoreline Access	32.1
501	4	Natural Resource Conservation	4	Natural Resource Conservation	55.0
502	4	Natural Resource Conservation	2	Project Operations	12.3
503	4	Natural Resource Conservation	3	Sensitive Resource Management	237.9
504	4	Natural Resource Conservation	6	Developed Recreation	0.8
505	4	Natural Resource Conservation	7	Shoreline Access	91.3

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
506	4	Natural Resource Conservation	7	Shoreline Access	46.5
507	4	Natural Resource Conservation	4	Natural Resource Conservation	31.9
508	4	Natural Resource Conservation	4	Natural Resource Conservation	43.1
509	4	Natural Resource Conservation	7	Shoreline Access	4.8
509	7	Shoreline Access	7	Shoreline Access	47.9
510	4	Natural Resource Conservation	4	Natural Resource Conservation	28.2
511	4	Natural Resource Conservation	7	Shoreline Access	1.8
511	7	Shoreline Access	7	Shoreline Access	44.4
512	7	Shoreline Access	6	Developed Recreation	3.6
513	4	Natural Resource Conservation	4	Natural Resource Conservation	95.1
513	7	Shoreline Access	4	Natural Resource Conservation	2.5
514	4	Natural Resource Conservation	7	Shoreline Access	11.7
515	4	Natural Resource Conservation	7	Shoreline Access	0.5
515	7	Shoreline Access	7	Shoreline Access	33.1
516	4	Natural Resource Conservation	4	Natural Resource Conservation	15.1
517	4	Natural Resource Conservation	4	Natural Resource Conservation	77.8
518	6	Developed Recreation	6	Developed Recreation	26.4
519	4	Natural Resource Conservation	7	Shoreline Access	18.8
519	7	Shoreline Access	7	Shoreline Access	68.2
520	4	Natural Resource Conservation	4	Natural Resource Conservation	45.4
521	6	Developed Recreation	6	Developed Recreation	27.2
522	4	Natural Resource Conservation	4	Natural Resource Conservation	212.3
523	6	Developed Recreation	6	Developed Recreation	346.8
524	3	Sensitive Resource Management	3	Sensitive Resource Management	39.0
525	4	Natural Resource Conservation	4	Natural Resource Conservation	97.5
526	4	Natural Resource Conservation	7	Shoreline Access	17.0

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
526	7	Shoreline Access	7	Shoreline Access	170.3
527	7	Shoreline Access	6	Developed Recreation	1.8
528	7	Shoreline Access	6	Developed Recreation	9.1
529	7	Shoreline Access	7	Shoreline Access	104.4
530	4	Natural Resource Conservation	3	Sensitive Resource Management	30.2
531	7	Shoreline Access	6	Developed Recreation	2.6
532	7	Shoreline Access	7	Shoreline Access	7.5
533	7	Shoreline Access	6	Developed Recreation	29.1
534	7	Shoreline Access	6	Developed Recreation	19.4
535	7	Shoreline Access	7	Shoreline Access	30.6
536	4	Natural Resource Conservation	4	Natural Resource Conservation	101.3
537	6	Developed Recreation	6	Developed Recreation	36.4
537	7	Shoreline Access	6	Developed Recreation	45.3
538	4	Natural Resource Conservation	3	Sensitive Resource Management	14.3
539	7	Shoreline Access	7	Shoreline Access	21.0
540	6	Developed Recreation	6	Developed Recreation	299.3
541	4	Natural Resource Conservation	7	Shoreline Access	3.3
541	7	Shoreline Access	7	Shoreline Access	21.9
542	4	Natural Resource Conservation	4	Natural Resource Conservation	85.8
542	7	Shoreline Access	4	Natural Resource Conservation	0.02
543	4	Natural Resource Conservation	7	Shoreline Access	6.6
543	7	Shoreline Access	7	Shoreline Access	31.5
544	4	Natural Resource Conservation	7	Shoreline Access	0.6
544	7	Shoreline Access	7	Shoreline Access	63.0
545	7	Shoreline Access	6	Developed Recreation	3.9
546	7	Shoreline Access	7	Shoreline Access	30.9
547	4	Natural Resource Conservation	4	Natural Resource Conservation	71.0
547	7	Shoreline Access	4	Natural Resource	7.1

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
				Conservation	
548	7	Shoreline Access	7	Shoreline Access	55.1
549	6	Developed Recreation	6	Developed Recreation	6.2
550	7	Shoreline Access	6	Developed Recreation	17.1
551	7	Shoreline Access	6	Developed Recreation	7.0
552	7	Shoreline Access	7	Shoreline Access	27.2
553	4	Natural Resource Conservation	7	Shoreline Access	19.4
553	7	Shoreline Access	7	Shoreline Access	5.6
554	4	Natural Resource Conservation	7	Shoreline Access	2.0
554	7	Shoreline Access	7	Shoreline Access	51.6
555	4	Natural Resource Conservation	4	Natural Resource Conservation	85.2
556	6	Developed Recreation	6	Developed Recreation	27.6
557	6	Developed Recreation	7	Shoreline Access	0.4
557	7	Shoreline Access	7	Shoreline Access	19.2
558	6	Developed Recreation	6	Developed Recreation	24.6
559	4	Natural Resource Conservation	7	Shoreline Access	1.3
559	7	Shoreline Access	7	Shoreline Access	184.6
560	4	Natural Resource Conservation	4	Natural Resource Conservation	1.7
561	4	Natural Resource Conservation	4	Natural Resource Conservation	201.0
562	4	Natural Resource Conservation	7	Shoreline Access	97.8
563	4	Natural Resource Conservation	6	Developed Recreation	1.5
564	4	Natural Resource Conservation	4	Natural Resource Conservation	934.8
564	7	Shoreline Access	4	Natural Resource Conservation	5.6
565	4	Natural Resource Conservation	7	Shoreline Access	26.6
566	4	Natural Resource Conservation	6	Developed Recreation	24.6
567	4	Natural Resource Conservation	7	Shoreline Access	1.4
567	6	Developed Recreation	7	Shoreline Access	78.0
568	6	Developed Recreation	6	Developed Recreation	157.1

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
569	6	Developed Recreation	6	Developed Recreation	146.7
570	4	Natural Resource Conservation	4	Natural Resource Conservation	75.8
571	4	Natural Resource Conservation	3	Sensitive Resource Management	76.7
572	3	Sensitive Resource Management	3	Sensitive Resource Management	148.4
101a	4	Natural Resource Conservation	6	Developed Recreation	13.7
101b	4	Natural Resource Conservation	7	Shoreline Access	1.1
468a	4	Natural Resource Conservation	7	Shoreline Access	2.9
468a	6	Developed Recreation	7	Shoreline Access	2.9

Table C-5. Nickajack Reservoir Land Allocations

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
1	2	Project Operations	2	Project Operations	404.4
1	3	Sensitive Resource Management	2	Project Operations	49.9
1	4	Natural Resource Conservation	2	Project Operations	441.3
2a	4	Natural Resource Conservation	6	Developed Recreation	5.6
2	4	Natural Resource Conservation	6	Developed Recreation	3.3
3	4	Natural Resource Conservation	6	Developed Recreation	46.0
4	3	Sensitive Resource Management	3	Sensitive Resource Management	329.0
4	4	Natural Resource Conservation	3	Sensitive Resource Management	6.3
5	2	Project Operations	2	Project Operations	131.5
5	3	Sensitive Resource Management	2	Project Operations	5.7
5	4	Natural Resource Conservation	2	Project Operations	37.7
6	4	Natural Resource Conservation	4	Natural Resource Conservation	66.5
7	2	Project Operations	4	Natural Resource Conservation	24.2
7	4	Natural Resource Conservation	4	Natural Resource Conservation	382.1
8	6	Developed Recreation	6	Developed Recreation	43.0
9	3	Sensitive Resource Management	3	Sensitive Resource Management	85.2
9	4	Natural Resource Conservation	3	Sensitive Resource Management	372.8
10	5	Industrial	5	Industrial	48.2
11	2	Project Operations	2	Project Operations	25.3
12	6	Developed Recreation	6	Developed Recreation	3.5
13	6	Developed Recreation	6	Developed Recreation	8.2

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
14	6	Developed Recreation	6	Developed Recreation	2.2
15	5	Industrial	5	Industrial	1.2
16	3	Sensitive Resource Management	3	Sensitive Resource Management	18.8
16	4	Natural Resource Conservation	3	Sensitive Resource Management	19.5
17	3	Sensitive Resource Management	2	Project Operations	1.7
17	4	Natural Resource Conservation	2	Project Operations	10.3
17	6	Developed Recreation	2	Project Operations	0.7
18a	4	Natural Resource Conservation	7	Shoreline Access	0.4
18	4	Natural Resource Conservation	4	Natural Resource Conservation	73.9
18	6	Developed Recreation	4	Natural Resource Conservation	0.1
19	6	Developed Recreation	6	Developed Recreation	4.2
20	6	Developed Recreation	6	Developed Recreation	0.2
21	6	Developed Recreation	7	Shoreline Access	0.3
22	4	Natural Resource Conservation	4	Natural Resource Conservation	30.7
23	4	Natural Resource Conservation	4	Natural Resource Conservation	37.6
24	2	Project Operations	6	Developed Recreation	2.1
24	5	Industrial	6	Developed Recreation	5.9
24	6	Developed Recreation	6	Developed Recreation	11.8
25	2	Project Operations	2	Project Operations	22.6
25	5	Industrial	2	Project Operations	3.0
26	5	Industrial	5	Industrial	19.9
27	4	Natural Resource Conservation	4	Natural Resource Conservation	22.3
28	2	Project Operations	2	Project Operations	0.7
29	4	Natural Resource Conservation	6	Developed Recreation	2.6

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
29	6	Developed Recreation	6	Developed Recreation	1.0
30	3	Sensitive Resource Management	4	Natural Resource Conservation	2.8
30	4	Natural Resource Conservation	4	Natural Resource Conservation	44.1
31	4	Natural Resource Conservation	6	Developed Recreation	23.0
32	0		5	Industrial	4.1
32	4	Natural Resource Conservation	5	Industrial	11.1
33	3	Sensitive Resource Management	3	Sensitive Resource Management	110.3
34	4	Natural Resource Conservation	4	Natural Resource Conservation	123.2
35	2	Project Operations	2	Project Operations	9.0
35	3	Sensitive Resource Management	2	Project Operations	7.1
35	4	Natural Resource Conservation	2	Project Operations	26.8
35	6	Developed Recreation	2	Project Operations	1.8
36	3	Sensitive Resource Management	3	Sensitive Resource Management	411.7
37	6	Developed Recreation	6	Developed Recreation	12.4
38	5	Industrial	5	Industrial	1.0
39	3	Sensitive Resource Management	3	Sensitive Resource Management	3.1

Table C-6. Normandy Reservoir Land Allocations

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
1	2	Project Operations	2	Project Operations	641.6
2	4	Natural Resource Conservation	4	Natural Resource Conservation	856.1
3	4	Natural Resource Conservation	2	Project Operations	1.1
4	4	Natural Resource Conservation	6	Developed Recreation	10.0
5	6	Developed Recreation	6	Developed Recreation	27.7
6	4	Natural Resource Conservation	4	Natural Resource Conservation	238.7
6	7	Shoreline Access	4	Natural Resource Conservation	3.7
7	7	Shoreline Access	7	Shoreline Access	9.4
8	4	Natural Resource Conservation	2	Project Operations	10.8
9	4	Natural Resource Conservation	7	Shoreline Access	1.0
10	4	Natural Resource Conservation	4	Natural Resource Conservation	304.5
11	4	Natural Resource Conservation	2	Project Operations	36.6
12	4	Natural Resource Conservation	4	Natural Resource Conservation	253.6
13	3	Sensitive Resource Management	4	Natural Resource Conservation	56.2
13	4	Natural Resource Conservation	4	Natural Resource Conservation	179.8
14	6	Developed Recreation	6	Developed Recreation	19.8
15	3	Sensitive Resource Management	2	Project Operations	9.8
15	4	Natural Resource Conservation	2	Project Operations	85.4
16	4	Natural Resource Conservation	2	Project Operations	4.1
17	Not Planned		4	Natural Resource Conservation	0.5
17	4	Natural Resource Conservation	4	Natural Resource Conservation	187.4
18	Not Planned		3	Sensitive Resource Management	1.1
18	3	Sensitive Resource Management	3	Sensitive Resource Management	175.9

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
19	3	Sensitive Resource Management	6	Developed Recreation	15.9
20	3	Sensitive Resource Management	2	Project Operations	1.5
21	Not Planned		3	Sensitive Resource Management	0.2
21	3	Sensitive Resource Management	3	Sensitive Resource Management	41.9
22	4	Natural Resource Conservation	4	Natural Resource Conservation	70.6
23	4	Natural Resource Conservation	6	Developed Recreation	42.3
24	4	Natural Resource Conservation	4	Natural Resource Conservation	186.9
25	Not Planned		4	Natural Resource Conservation	0.7
25	4	Natural Resource Conservation	4	Natural Resource Conservation	471.1
26	3	Sensitive Resource Management	3	Sensitive Resource Management	152.6
27	3	Sensitive Resource Management	4	Natural Resource Conservation	266.4
27	4	Natural Resource Conservation	4	Natural Resource Conservation	26.9
28	4	Natural Resource Conservation	4	Natural Resource Conservation	126.8
29	6	Developed Recreation	6	Developed Recreation	143.1
30	4	Natural Resource Conservation	4	Natural Resource Conservation	135.7

Table C-7. Wheeler Reservoir Land Allocations

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
1	2	Project Operations	2	Project Operations	128.6
2	2	Project Operations	6	Developed Recreation	22.7
3	6	Developed Recreation	6	Developed Recreation	174.8
4	2	Project Operations	2	Project Operations	8.9
5	4	Natural Resource Conservation	3	Sensitive Resource Management	11.2
6	6	Developed Recreation	4	Natural Resource Conservation	8.3
7	3	Sensitive Resource Management	3	Sensitive Resource Management	21.5
8	3	Sensitive Resource Management	3	Sensitive Resource Management	4.4
9	6	Developed Recreation	6	Developed Recreation	1.2
10	7	Shoreline Access	7	Shoreline Access	9.2
11	5	Industrial	6	Developed Recreation	91.3
12	5	Industrial	5	Industrial	38.7
13	7	Shoreline Access	7	Shoreline Access	11.1
14	6	Developed Recreation	6	Developed Recreation	5.3
15	7	Shoreline Access	7	Shoreline Access	10.5
16	6	Developed Recreation	6	Developed Recreation	20.8
17	6	Developed Recreation	2	Project Operations	1.1
18	3	Sensitive Resource Management	4	Natural Resource Conservation	0.9
19	7	Shoreline Access	7	Shoreline Access	1.8
20	4	Natural Resource Conservation	4	Natural Resource Conservation	23.1
21	4	Natural Resource Conservation	2	Project Operations	1.6
22	6	Developed Recreation	6	Developed Recreation	3.9
23	7	Shoreline Access	7	Shoreline Access	29.5
24	3	Sensitive Resource Management	3	Sensitive Resource Management	30.5

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
25	4	Natural Resource Conservation	2	Project Operations	3.7
26	4	Natural Resource Conservation	4	Natural Resource Conservation	8.4
27	4	Natural Resource Conservation	2	Project Operations	11.7
28	4	Natural Resource Conservation	3	Sensitive Resource Management	10.0
29	6	Developed Recreation	6	Developed Recreation	26.8
30	3	Sensitive Resource Management	3	Sensitive Resource Management	15.1
31	3	Sensitive Resource Management	3	Sensitive Resource Management	16.4
32	4	Natural Resource Conservation	4	Natural Resource Conservation	42.5
33	4	Natural Resource Conservation	3	Sensitive Resource Management	7.6
34	4	Natural Resource Conservation	4	Natural Resource Conservation	114.0
35	4	Natural Resource Conservation	3	Sensitive Resource Management	195.4
36	3	Sensitive Resource Management	2	Project Operations	2.7
37	4	Natural Resource Conservation	4	Natural Resource Conservation	30.5
38	3	Sensitive Resource Management	4	Natural Resource Conservation	4.5
39	4	Natural Resource Conservation	2	Project Operations	4.4
40	6	Developed Recreation	6	Developed Recreation	6.5
41	3	Sensitive Resource Management	4	Natural Resource Conservation	7.3
42	4	Natural Resource Conservation	4	Natural Resource Conservation	84.0
43	4	Natural Resource Conservation	4	Natural Resource Conservation	206.5
44	4	Natural Resource Conservation	4	Natural Resource Conservation	70.8
45	3	Sensitive Resource Management	4	Natural Resource Conservation	52.2

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
46	4	Natural Resource Conservation	4	Natural Resource Conservation	117.2
47	3	Sensitive Resource Management	3	Sensitive Resource Management	317.2
48	4	Natural Resource Conservation	6	Developed Recreation	5.3
49	6	Developed Recreation	6	Developed Recreation	3.7
50	3	Sensitive Resource Management	4	Natural Resource Conservation	137.6
51	7	Shoreline Access	7	Shoreline Access	13.3
52	4	Natural Resource Conservation	4	Natural Resource Conservation	5.7
53	7	Shoreline Access	7	Shoreline Access	7.5
54	4	Natural Resource Conservation	4	Natural Resource Conservation	0.8
55	6	Developed Recreation	6	Developed Recreation	5.9
56	6	Developed Recreation	5	Industrial	44.6
57	6	Developed Recreation	4	Natural Resource Conservation	136.2
58	6	Developed Recreation	3	Sensitive Resource Management	100.7
59	7	Shoreline Access	7	Shoreline Access	18.4
60	4	Natural Resource Conservation	4	Natural Resource Conservation	100.8
61	4	Natural Resource Conservation	7	Shoreline Access	4.8
62	4	Natural Resource Conservation	3	Sensitive Resource Management	68.3
63	6	Developed Recreation	6	Developed Recreation	32.6
64	4	Natural Resource Conservation	4	Natural Resource Conservation	2.9
65	7	Shoreline Access	7	Shoreline Access	8.7
66	4	Natural Resource Conservation	4	Natural Resource Conservation	9.1
67	4	Natural Resource Conservation	3	Sensitive Resource Management	7.6
68	7	Shoreline Access	7	Shoreline Access	14.3
69	3	Sensitive Resource Management	4	Natural Resource Conservation	8.8
70	3	Sensitive	4	Natural Resource	8.7

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Resource Management		Conservation	
71	3	Sensitive Resource Management	4	Natural Resource Conservation	9.0
72	4	Natural Resource Conservation	4	Natural Resource Conservation	6.3
73	7	Shoreline Access	7	Shoreline Access	10.3
74	6	Developed Recreation	6	Developed Recreation	60.2
75	6	Developed Recreation	2	Project Operations	20.0
76	3	Sensitive Resource Management	3	Sensitive Resource Management	35.3
77	4	Natural Resource Conservation	4	Natural Resource Conservation	332.1
78	4	Natural Resource Conservation	2	Project Operations	35.1
79	4	Natural Resource Conservation	3	Sensitive Resource Management	56.9
80	4	Natural Resource Conservation	2	Project Operations	1.2
81	4	Natural Resource Conservation	4	Natural Resource Conservation	4145.4
82	2	Project Operations	2	Project Operations	0.04
82	4	Natural Resource Conservation	2	Project Operations	22.9
83	4	Natural Resource Conservation	2	Project Operations	19.7
84	2	Project Operations	5	Industrial	31.7
85	2	Project Operations	6	Developed Recreation	58.6
86	2	Project Operations	2	Project Operations	2.3
86	4	Natural Resource Conservation	2	Project Operations	66.8
87	2	Project Operations	2	Project Operations	81.3
87	4	Natural Resource Conservation	2	Project Operations	0.3
88	4	Natural Resource Conservation	4	Natural Resource Conservation	13313.3
89	4	Natural Resource Conservation	2	Project Operations	5.2
90	4	Natural Resource Conservation	4	Natural Resource Conservation	39.3
91	5	Industrial	5	Industrial	17.2

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
92	5	Industrial	5	Industrial	17.6
93	4	Natural Resource Conservation	2	Project Operations	107.9
94	4	Natural Resource Conservation	6	Developed Recreation	6.4
95	4	Natural Resource Conservation	6	Developed Recreation	1.7
96	5	Industrial	2	Project Operations	4.3
97	2	Project Operations	2	Project Operations	4066.9
98	3	Sensitive Resource Management	3	Sensitive Resource Management	70.3
99	6	Developed Recreation	6	Developed Recreation	74.1
100	6	Developed Recreation	5	Industrial	4.2
101	4	Natural Resource Conservation	6	Developed Recreation	0.8
101	6	Developed Recreation	6	Developed Recreation	10.9
102	4	Natural Resource Conservation	4	Natural Resource Conservation	55.7
103	4	Natural Resource Conservation	2	Project Operations	1.8
103	6	Developed Recreation	2	Project Operations	0.7
104	5	Industrial	5	Industrial	0.3
105	4	Natural Resource Conservation	4	Natural Resource Conservation	6.9
106	3	Sensitive Resource Management	4	Natural Resource Conservation	42.4
107	3	Sensitive Resource Management	3	Sensitive Resource Management	6.6
108	4	Natural Resource Conservation	4	Natural Resource Conservation	3.7
109	4	Natural Resource Conservation	4	Natural Resource Conservation	279.3
110	4	Natural Resource Conservation	3	Sensitive Resource Management	275.3
111	4	Natural Resource Conservation	4	Natural Resource Conservation	7.5
112	6	Developed Recreation	6	Developed Recreation	14.9
113	6	Developed Recreation	2	Project Operations	2.3
114	3	Sensitive	4	Natural Resource	40.7

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
		Resource Management		Conservation	
115	4	Natural Resource Conservation	4	Natural Resource Conservation	434.0
116	4	Natural Resource Conservation	4	Natural Resource Conservation	174.3
117	3	Sensitive Resource Management	3	Sensitive Resource Management	20.3
118	3	Sensitive Resource Management	2	Project Operations	3.6
119	3	Sensitive Resource Management	3	Sensitive Resource Management	51.7
120	3	Sensitive Resource Management	3	Sensitive Resource Management	20.0
121	4	Natural Resource Conservation	4	Natural Resource Conservation	148.8
122	4	Natural Resource Conservation	3	Sensitive Resource Management	16.8
123	3	Sensitive Resource Management	3	Sensitive Resource Management	49.9
124	3	Sensitive Resource Management	2	Project Operations	5.9
125	3	Sensitive Resource Management	3	Sensitive Resource Management	49.2
126	3	Sensitive Resource Management	3	Sensitive Resource Management	62.2
127	3	Sensitive Resource Management	4	Natural Resource Conservation	3.2
128	3	Sensitive Resource Management	2	Project Operations	1.1
129	3	Sensitive Resource Management	3	Sensitive Resource Management	103.1
130	3	Sensitive Resource Management	3	Sensitive Resource Management	291.6
131	3	Sensitive Resource Management	3	Sensitive Resource Management	59.9

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
132	3	Sensitive Resource Management	3	Sensitive Resource Management	73.3
133	3	Sensitive Resource Management	5	Industrial	4.0
134	3	Sensitive Resource Management	3	Sensitive Resource Management	6.3
135	2	Project Operations	2	Project Operations	1.2
136	3	Sensitive Resource Management	3	Sensitive Resource Management	62.7
137	3	Sensitive Resource Management	3	Sensitive Resource Management	342.6
138	3	Sensitive Resource Management	3	Sensitive Resource Management	122.8
139	3	Sensitive Resource Management	4	Natural Resource Conservation	3.3
140	4	Natural Resource Conservation	2	Project Operations	3.8
141a	3	Sensitive Resource Management	7	Shoreline Access	0.5
141	3	Sensitive Resource Management	4	Natural Resource Conservation	46.7
142	4	Natural Resource Conservation	3	Sensitive Resource Management	15.0
143	3	Sensitive Resource Management	5	Industrial	1.1
144	3	Sensitive Resource Management	4	Natural Resource Conservation	724.3
145	6	Developed Recreation	6	Developed Recreation	59.9
146	3	Sensitive Resource Management	3	Sensitive Resource Management	91.6
147	4	Natural Resource Conservation	2	Project Operations	4.5
148	4	Natural Resource Conservation	4	Natural Resource Conservation	425.8
149	4	Natural Resource Conservation	2	Project Operations	4.5

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
150	6	Developed Recreation	6	Developed Recreation	4.5
151	3	Sensitive Resource Management	3	Sensitive Resource Management	165.7
152	4	Natural Resource Conservation	4	Natural Resource Conservation	182.2
153	3	Sensitive Resource Management	4	Natural Resource Conservation	6.3
154	3	Sensitive Resource Management	4	Natural Resource Conservation	2.2
154	4	Natural Resource Conservation	4	Natural Resource Conservation	0.6
155	4	Natural Resource Conservation	4	Natural Resource Conservation	14.9
156	3	Sensitive Resource Management	2	Project Operations	7.0
156	4	Natural Resource Conservation	2	Project Operations	18.6
157	4	Natural Resource Conservation	6	Developed Recreation	4.7
158	3	Sensitive Resource Management	3	Sensitive Resource Management	132.8
159	4	Natural Resource Conservation	4	Natural Resource Conservation	39.5
160	4	Natural Resource Conservation	2	Project Operations	9.5
160	6	Developed Recreation	2	Project Operations	1.4
161	4	Natural Resource Conservation	3	Sensitive Resource Management	614.9
162	4	Natural Resource Conservation	6	Developed Recreation	3.4
162	6	Developed Recreation	6	Developed Recreation	9.4
163	4	Natural Resource Conservation	6	Developed Recreation	7.9
164	4	Natural Resource Conservation	4	Natural Resource Conservation	39.7
165	3	Sensitive Resource Management	3	Sensitive Resource Management	27.2
166	4	Natural Resource Conservation	4	Natural Resource Conservation	119.4
167	4	Natural Resource Conservation	6	Developed Recreation	4.7

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
168	3	Sensitive Resource Management	4	Natural Resource Conservation	717.2
169	5	Industrial	5	Industrial	3.6
170	2	Project Operations	2	Project Operations	2.7
171	6	Developed Recreation	6	Developed Recreation	420.7
172	3	Sensitive Resource Management	3	Sensitive Resource Management	7.8
173	6	Developed Recreation	6	Developed Recreation	10.0
174	3	Sensitive Resource Management	3	Sensitive Resource Management	15.5
175	2	Project Operations	2	Project Operations	16.7
176	6	Developed Recreation	6	Developed Recreation	3.5
177	5	Industrial	5	Industrial	17.0
178	6	Developed Recreation	6	Developed Recreation	4.1
179	6	Developed Recreation	2	Project Operations	7.8
180	4	Natural Resource Conservation	5	Industrial	14.0
181	6	Developed Recreation	6	Developed Recreation	5.2
182	5	Industrial	5	Industrial	222.5
183	3	Sensitive Resource Management	4	Natural Resource Conservation	2.0
184	3	Sensitive Resource Management	4	Natural Resource Conservation	1391.8
185	4	Natural Resource Conservation	2	Project Operations	8.4
186	4	Natural Resource Conservation	7	Shoreline Access	3.1
187	3	Sensitive Resource Management	4	Natural Resource Conservation	209.2
188	6	Developed Recreation	6	Developed Recreation	108.6
189	6	Developed Recreation	3	Sensitive Resource Management	3.1
190	3	Sensitive Resource Management	2	Project Operations	9.4

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
191	3	Sensitive Resource Management	4	Natural Resource Conservation	21.2
192	4	Natural Resource Conservation	2	Project Operations	56.2
193	4	Natural Resource Conservation	4	Natural Resource Conservation	122.9
194	6	Developed Recreation	2	Project Operations	9.1
195	6	Developed Recreation	6	Developed Recreation	4.9
196	7	Shoreline Access	7	Shoreline Access	0.7
198	6	Developed Recreation	2	Project Operations	34.7
199	6	Developed Recreation	4	Natural Resource Conservation	121.2
200	6	Developed Recreation	6	Developed Recreation	26.8
201	3	Sensitive Resource Management	4	Natural Resource Conservation	794.9
202	3	Sensitive Resource Management	2	Project Operations	6.2
203	5	Industrial	5	Industrial	82.8
204	3	Sensitive Resource Management	5	Industrial	396.3
205	4	Natural Resource Conservation	4	Natural Resource Conservation	16.1
206	2	Project Operations	6	Developed Recreation	4.0
207	2	Project Operations	6	Developed Recreation	1.8

Table C-8. Wilson Reservoir Land Allocations

Parcel	Alternative A No Action Alternative	Zone Description	Alternative B Proposed Alternative	Zone Description	Acres per Allocation
1	2	Project Operations	2	Project Operations	42.5
2	6	Developed Recreation	6	Developed Recreation	41.0
3	2	Project Operations	2	Project Operations	48.5
4	6	Developed Recreation	6	Developed Recreation	85.4
5	2	Project Operations	2	Project Operations	7.7
6	6	Developed Recreation	6	Developed Recreation	0.02
7	6	Developed Recreation	6	Developed Recreation	4.9
8	2	Project Operations	2	Project Operations	2.6
9	6	Developed Recreation	6	Developed Recreation	17.2
10	7	Shoreline Access	7	Shoreline Access	2.8
11	2	Project Operations	2	Project Operations	5.6
12	2	Project Operations	2	Project Operations	15.3
13	2	Project Operations	2	Project Operations	930.8
14	2	Project Operations	2	Project Operations	19.2

Appendix D – Supporting Data

This page left blank intentionally

List of Tables

Table D-1. Parcels Reallocated to Provide Shoreline Areas – Chickamauga Reservoir 242
Table D-2. Parcels Reallocated to Provide Shoreline Areas – Fort Loudoun Reservoir 242
Table D-3. Parcels Reallocated to Provide Shoreline Areas – Kentucky Reservoir 243
Table D-4. Parcels Reallocated to Provide Shoreline Areas – Nickajack Reservoir 246
Table D-5. Parcels Reallocated to Provide Shoreline Areas – Normandy Reservoir 246
Table D-6. Parcels Reallocated to Provide Shoreline Areas – Wheeler Reservoir 246
Table D-7. Allocation Differences Among Alternatives – Chickamauga Reservoir 247
Table D-8. Allocation Differences Among Alternatives – Kentucky Reservoir 249
Table D-9. Allocation Differences Among Alternatives – Nickajack Reservoir 252
Table D-10. Allocation Differences Among Alternatives – Normandy Reservoir 253
Table D-11. Allocation Differences Among Alternatives – Wheeler Reservoir 254
Table D-12. Flood Profiles – Chickamauga Reservoir Flood Profiles 256
Table D-13. Flood Profiles – Fort Loudoun Reservoir 259
Table D-14. Flood Profiles – Great Falls Reservoir 262
Table D-15. Flood Profiles –Kentucky Reservoir 264
Table D-16. Flood Profiles –Nickajack Reservoir 269
Table D-17. Flood Profiles – Wheeler Reservoir 272
Table D-18. Flood Profiles – Wilson Reservoir 276
Table D-19. Natural Areas Managed by All Entities – Chickamauga Reservoir 277
Table D-20. Natural Areas Managed by All Entities – Fort Loudoun Reservoir 279
Table D-22. Natural Areas Managed by All Entities – Great Falls Reservoir 280
Table D-23. Natural Areas Managed by All Entities – Kentucky Reservoir 281
Table D-23. Natural Areas Managed by All Entities – Nickajack Reservoir 283
Table D-24. Natural Areas Managed by All Entities – Normandy Reservoir 284
Table D-25. Natural Areas Managed by Other Entities – Wheeler Reservoir 285
Table D-26. Natural Areas Managed by Other Entities – Wilson Reservoir 286
Table D-27. Natural Areas within 3 Miles of Chickamauga Reservoir 287
Table D-28. Natural Areas within 3 Miles of Fort Loudoun Reservoir 288
Table D-29. Natural Areas within 3 Miles of Great Falls Reservoir 289
Table D-30. Natural Areas within 3 Miles of Kentucky Reservoir 290
Table D-31. Natural Areas within 3 Miles of Nickajack Reservoir 290
Table D-32. Natural Areas within 3 Miles of Normandy Reservoir 293
Table D-33. Natural Areas within 3 Miles of Wheeler Reservoir 294
Table D-34. Natural Areas within 3 Miles of Wilson Reservoir 295

Table D-32. Parcels Reallocated to Provide Shoreline Areas – Chickamauga Reservoir

Parcel Number	Zone by Alternative		Acres
	A	B	
16	4	7	0.3
37	3	7	1.1
39	6	7	0.2
49	6	7	1.3
66	5	7	2.2
99	4	7	0.1
125	6	7	4.2
133	4	7	0.0
139	3	7	1.1
146	4	7	0.4
167	4	7	4.6
176	3	7	0.0
188	3	7	0.0
205	3	7	0.7
232	4	7	3.6
238	4	7	3.0
247	4	7	4.6
282	4	7	7.0

Table D-33. Parcels Reallocated to Provide Shoreline Areas – Fort Loudoun Reservoir

Parcel Number	Zone by Alternative		Acres
	A	B	
61	6	7	2.3
83	4	7	0.2
41a	Not Planned	7	0.7

Table D-34. Parcels Reallocated to Provide Shoreline Areas – Kentucky Reservoir

Parcel Number	Zone by Alternative		Acres
	A	B	
10	4	7	0.1
12	4	7	3.7
14	4	7	6.7
16	4	7	0.2
20	4	7	0.1
24	4	7	8.6
26	4	7	24.9
28	4	7	0.2
30	4	7	1.8
32	4	7	1.3
34	4	7	21.8
40	4	7	0.4
51	4	7	3.4
54	4	7	4.6
58	4	7	30.9
60	4	7	2.0
62	4	7	3.8
64	4	7	3.2
68	4	7	0.5
73	6	7	1.7
75	4	7	76.2
78	4	7	0.9
80	4	7	0.4
84	4	7	51.4
105	3	7	12.7
106	4	7	2.1
107	3	7	25.7
108	3	7	11.9
119	4	7	10.4
125	4	7	5.2
145	4	7	15.6
184	4	7	2.1
189	4	7	7.9
238	4	7	24.8
239	4	7	11.1
241	4	7	39.2
243	4	7	0.2
251	4	7	42.8
254	4	7	11.6
256	4	7	108.9
257	4	7	7.9
260	4	7	2.4
263	4	7	0.1
269	4	7	7.1
270	4	7	25.8

Parcel Number	Zone by Alternative		Acres
	A	B	
272	4	7	32.3
275	4	7	2.0
277	4	7	4.7
288	4	7	17.9
295	4	7	55.2
303	4	7	0.3
312	4	7	3.8
316	4	7	9.4
322	4	7	0.7
325	4	7	0.1
328	4	7	5.4
330	4	7	52.4
333	4	7	0.3
337	4	7	19.5
341	4	7	27.8
346	4	7	11.7
355	4	7	22.0
356	4	7	11.7
360	4	7	5.9
368	4	7	16.3
370	4	7	3.2
372	6	7	1.4
378	4	7	11.4
381	4	7	8.7
387	4	7	1.9
390	4	7	3.7
391	4	7	39.2
392	4	7	45.5
392	6	7	4.1
394	6	7	0.4
399	4	7	14.4
399	5	7	1.6
402	4	7	0.8
409	4	7	8.0
412	4	7	5.3
415	4	7	23.4
418	4	7	8.4
421	4	7	1.5
431	4	7	0.5
433	4	7	3.7
435	4	7	3.2
436	4	7	0.5
438	4	7	0.5
440	4	7	56.1
443	4	7	1.5
445	4	7	14.7

Parcel Number	Zone by Alternative		Acres
	A	B	
447	3	7	6.3
447	4	7	67.0
448	4	7	13.2
450	4	7	1.0
452	4	7	0.8
456	4	7	5.3
458	4	7	14.3
463	4	7	5.3
465	4	7	1.0
470	4	7	0.7
472	4	7	1.4
475	4	7	4.8
477	4	7	30.4
485	4	7	23.2
485	6	7	11.9
488	4	7	0.4
490	4	7	0.2
495	4	7	5.4
497	4	7	17.6
500	4	7	1.3
505	4	7	91.3
506	4	7	46.5
509	4	7	4.8
511	4	7	1.8
514	4	7	11.7
515	4	7	0.5
519	4	7	18.8
526	4	7	17.0
541	4	7	3.3
543	4	7	6.6
544	4	7	0.6
553	4	7	19.4
554	4	7	2.0
557	6	7	0.4
559	4	7	1.3
562	4	7	97.8
565	4	7	26.6
567	4	7	1.4
567	6	7	78.0
101b	4	7	1.1
468a	4	7	2.9
468a	6	7	2.9

Table D-35. Parcels Reallocated to Provide Shoreline Areas – Nickajack Reservoir

Parcel Number	Zone by Alternative		Acres
	A	B	
18a	4	7	0.4
21	6	7	0.3

Table D-36. Parcels Reallocated to Provide Shoreline Areas – Normandy Reservoir

Parcel Number	Zone by Alternative		Acres
	A	B	
9	4	7	1.0

Table D-37. Parcels Reallocated to Provide Shoreline Areas – Wheeler Reservoir

\

Parcel Number	Zone by Alternative		Acres
	A	B	
61	4	7	4.8
186	4	7	3.1
141a	3	7	0.5

Table D-38. Allocations by Parcel that are not Based on Existing Land Use Agreements and Commitments – Chickamauga Reservoir

Parcel Number	Zone by Alternative		Acres	Description
	A	B		
2	2	3	226.3	Contains sensitive resources
7	3	4	7.4	Contains no known sensitive resources; good wildlife habitat
17	4	3	0.6	Contains sensitive resources.
38	3	4	9.3	Contains no known sensitive resources; good wildlife habitat
53	3	4	6.3	Contains no known sensitive resources; good wildlife habitat
65	5	3	1.2	Shoreline buffer with high probability for cultural resources
77	4	3	0.8	Sensitive resources are present
103	3	4	35.3	Contains no known sensitive resources; good wildlife habitat
108	4	3	1.8	Sensitive resources are present
111	4	3	4.1	Contains good wildlife habitat to support Hiwassee Refuge
113	7	4	6.0	Adjacent to former TVA property that does not have the necessary rights for water use facilities
114	4	6	0.8	Adjacent to land transferred to the state of Tennessee for public recreation
119	2	4	6.8	Consists of many small tracts in and around the Town of Dayton. Supports bank fishing
119	6	4	2.3	
123	3	4	2.5	Adjacent to former TVA property that does not have the necessary rights for water use facilities.
123	7	4	1.1	Adjacent to former TVA property that does not have the necessary rights for water use facilities.
132	4	3	54.8	High quality wetlands
135	4	6	5.4	Could support developed recreation
137	3	4	206.2	Excellent wildlife habitat.
140	3	4	150.7	Contains no known sensitive resources; good wildlife habitat
153	3	4	232.1	Contains no known sensitive resources; good wildlife habitat
163a	2	6	3.2	Has potential for commercial recreation purposes
168	4	3	3.5	Contains sensitive resources
168	7	3	22.3	Contains sensitive resources
182	3	4	6.4	Borders an area with sensitive resources; good wildlife habitat
184	2	3	0.9	Contains sensitive habitat
190	3	4	21.7	Managed via a term agricultural license for hay production
192	2	6	0.2	Shoreline parcel could be used for developed recreation
192	4	6	1.1	Shoreline parcel could be used for developed recreation
193	3	4	380.0	Managed to maximize wildlife habitat and public use enhancements.
197	4	3	30.9	Managed to maximize wildlife habitat and public use enhancements
199	3	4	39.0	Supports high quality wildlife habitat. A portion of

Parcel Number	Zone by Alternative		Acres	Description
	A	B		
				the parcel is used for hay production.
204	3	4	232.4	Contains high quality habitat. A portion of the parcel is used for hay production
206	4	3	0.3	Provides high quality nesting habitat for waterfowl and other wildlife
208	3	4	1.0	Contains diverse land cover is valuable wildlife habitat for many species, both mammal and bird. Under easement to TWRA for the Chickamauga WMA
212	3	4	13.9	Parcel is owned and managed by TWRA as part of the Hiwassee Refuge
214	3	4	810.4	Managed by TWRA as part of the Hiwassee Refuge
215	3	4	38.4	Managed by TWRA as part of the Hiwassee Refuge
217	3	4	20.0	Managed by TWRA as part of the Hiwassee Refuge
221	6	4	29.5	Managed by TVA for forest resources
233	4	3	9.1	Good waterfowl nesting habitat and shorebird habitat
254	4	3	0.1	Good riparian habitat. River section supports sensitive species
254	6	3	9.2	
262	4	6	0.9	Potential for development as part of the Charleston Greenway
264	4	3	0.9	Sensitive resources are present
266	3	4	12.8	Contains no known sensitive resources; good wildlife habitat
279	4	3	102.2	Contains sensitive resources
293	3	4	735.9	Managed by TWRA as part of the Hiwassee Refuge
303	4	3	3.1	Limited amounts of wildlife habitat. A narrow band of aquatic bed and emergent wetlands are located along the shoreline
312	4	3	1.6	Contains sensitive resources
322	4	3	6.6	Contains sensitive resources
328	4	3	1.5	Provides a visual buffer, and important nesting/wading habitat for waterfowl and shorebirds
346	4	3	0.8	Has high quality wetlands and excellent wildlife habitat
351	4	6	6.3	Potential for development of developed recreation
353	4	3	65.7	Unique habitat to both upland and wetland species
357	4	3	3.3	Provides a visual buffer, and important nesting/shallow water habitat for waterfowl and shorebirds

Table D-39. Allocations by Parcel that are not Based on Existing Land Use Agreements and Commitments – Kentucky Reservoir

Parcel Number	Zone by Alternative		Acres	Description
	A	B		
35	4	3	43.2	Provides beneficial habitat for several bottomland forest game animals, as well as a diversity of wetland wildlife species
36	5	4	17.0	Contains no known sensitive resources; good wildlife habitat
37	4	5	44.3	Could be considered for future industrial development
49	4	3	21.9	provides beneficial habitat for several upland game animals, as well as a diversity of wetland wildlife species
56	4	3	72.0	Wetland Mitigation Site
56	7	3	31.7	Wetland Mitigation Site
59	4	3	8.0	Contains wetlands and wildlife habitat, sensitive species are present
65	4	3	19.5	Contains predominantly forested wetlands and provides habitat for a variety of wetland wildlife species
81	6	4	117.8	Provides beneficial habitat for upland game species. No known sensitive species present
83	4	3	10.0	Contains high quality wetlands. Provides habitat and nesting opportunities for waterfowl, wading birds, shorebirds and raptors
89	4	3	409.3	Contains high quality wetlands. Provides habitat for game species. Contains sensitive resources
97	4	5	191.4	Potential for future industrial development
99	5	3	0.8	Contains the Tribble Woods Habitat Protection Area. Sensitivity resources are present
111	2	4	9.8	Contains deciduous forest and forested wetlands. Potential for research on historic bottomland hardwood plantings
115	4	3	48.0	Supports the Lady's Bluff Small Wild Area. The parcel is managed to preserve unique natural features such as waterfalls, caves, ravines, scenic views, and plant life
128	4	3	732.7	Contains high quality wetlands and excellent habitat and nesting sites for a variety of waterfowl and other wetland wildlife species. Used as foraging habitat by the federally endangered Gray bats (*Myotis grisescens*)
131	4	3	99.5	Supports deciduous forest, forested wetlands, and scrub–shrub wetlands. High probability for cultural resources
136	5	3	87.4	Proposed for inclusion in the Jennings Bluff Habitat Protection Area. Contains sensitive species
138	5	4	181.8	Contains deciduous forest, forested wetlands, and scrub–shrub wetlands. Sensitive species are not present
139	4	5	701.4	Potential for industrial development
140	4	3	264.4	Supports deciduous forest and limited shoreline wetlands. Contains sensitive resources
164	4	3	53.5	Includes a proposed habitat area and contains a wetland complex and old growth bottomland hardwoods with rare histosol soils

Parcel Number	Zone by Alternative		Acres	Description
	A	B		
177	5	4	19.8	Serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Sensitive species are not known to be present
186	4	3	6.1	Serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. High probability for presence of sensitive resources
190	5	3	2.6	Serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. High probability for presence of sensitive resources
202	4	3	218.4	Contains high quality wetlands. Sensitive species are adjacent to the parcels
204	5	4	39.6	Contains significant high quality forested wetlands. Sensitive species not known to be present
226	5	3	1.9	Parcel has historic significance
226	6	3	2.3	
234	4	3	54.5	Contains sensitive species
246	4	3	6.0	Contains high quality wetlands
253	4	3	225.4	Contains high quality wetlands and serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions
264	4	3	9.3	Contains high quality forested, scrub-shrub, and emergent wetlands. This area serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions
265	4	3	3.7	Contains high quality wetlands
271	4	5	4.3	Potential for industrial development
271	6	5	83.1	
276	4	3	119.8	Serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions
292	4	3	0.3	Contains wetlands and potential sensitive resources
299	4	3	122.4	A portion of the parcel is within the Harmon Creek WMA and includes high quality wetlands
310	4	3	8.9	Contains wetlands
313	4	3	69.9	Contains the Crooked Creek HPA
323	4	3	25.5	Contains wetlands and potential sensitive resources
324	4	3	12.5	Contains wetlands and potential sensitive resources
326	4	6	15.5	Potential for developed recreation
327	4	3	23.2	Contains the TWRA Lick Creek WMA. Contains high quality wetlands and potential for sensitive resources
357	4	3	23.6	Designated as Clendenin Creek HPA and was established in 1985 for protection of a state–listed non–flowering plant related to ferns
359	4	3	14.5	Contains riparian forests and shoreline fringe emergent wetlands. Potential for sensitive resources
364	4	3	85.0	Contains wetlands along the shoreline and a cemetery is located on the parcel. Potential for sensitive resources
371	6	4	12.4	Contains wetlands and supports agricultural use. Potential for sensitive resources

Parcel Number	Zone by Alternative		Acres	Description
	A	B		
375	5	4	24.2	Encompasses the West Sandy Wildlife Management Area. Potential for sensitive resources. Potential for sensitive resources
375	6	4	0.1	
379	4	3	67.8	Proposed as the Henson Branch Histosol TVA HPA. Contains unique plant assemblages
398	5	4	5.2	Contains wetlands, loblolly pine plantations; and historic hardwood tree plantings. Potential for management of forest to enhance wildlife management
423	6	4	14.2	A majority of this parcel features bottomland forests and high quality forested, scrub–shrub, and fringe emergent wetlands that serve as riparian habitats. Sensitive resources are not present
446	4	3	881.8	Contains high quality wetlands and three natural areas
461	6	4	138.5	Contains high quality wetlands and sensitive species. Potential for development of timber management to enhance wildlife habitat diversity
480	6	4	47.0	Contains wetlands and four dispersed recreation sites that are considered as candidates for management actions. Sensitive species are not known to be present
484	4	3	24.3	This parcel features mostly upland hardwoods And is located adjacent to substantial development, and disperse recreational use is limited. Potential for sensitive resources
496	4	3	30.0	Contains wetlands. Potential for sensitive species
503	4	3	237.9	Contains high quality wetlands which provide fish spawning and nursery habitat. Potential for sensitive resources
530	4	3	30.2	Serves as a visual buffer from nearby shoreline development. Potential for sensitive resources
538	4	3	14.3	A cemetery is located on the parcel and there is a potential for sensitive resources
566	4	6	24.6	Potential for developed recreation
571	4	3	76.7	Proposed as the Tupelo–Cypress Swamp HPA and SWA

Table D-40. Allocation Differences Among Alternatives – Nickajack Reservoir

Parcel Number	Zone by Alternative		Acres	Description
	A	B		
4	4	3	6.3	Contains the Little Cedar Mountain SWA and HPA
7	2	4	24.2	This parcel provides a unique habitat for plants and animals. It contains a series of old logging roads which facilitates hiking and hunting access throughout the tract. No known sensitive resources are present
9	4	3	372.8	Parcel contains the Marion Bridge HPA and contains sensitive plant species
16	4	3	19.5	Parcel contains the Huff Branch HPA. Sensitive species are present
18	6	4	0.1	This parcel consists of eight non-contagious tracts of land: four shoreline tracts and four adjacent islands. The current land cover is upland hardwoods with areas of open shoreline. However, aquatic wetlands, scrub-shrub, and emergent wetlands can be found along the shoreline of this tract
29	4	6	2.6	Potential for developed recreation
30	3	4	2.8	Contains wetlands that provide excellent habitat for wading birds and migratory waterfowl. No known sensitive resources are known to be present
31	4	6	23.0	Potential for developed recreation

Table D-41. Allocations by Parcel that are not Based on Existing Land Use Agreements and Commitments – Normandy Reservoir

Parcel Number	Zone by Alternative		Acres	Description
	A	B		
4	4	6	10.0	Potential for developed recreation
13	3	4	56.1	Contains upland hardwood, red cedar and agricultural fields. Sensitive ecological resources are not present
17	Not Planned	4	0.5	Contains upland hardwoods. Sensitive ecological resources are not present
18	Not Planned	3	1.1	Contains a valuable river corridor that is largely undisturbed. Potential for sensitive resources
19	3	6	15.9	Potential for developed recreation
21	Not Planned	3	0.2	Contains a valuable river corridor that is largely undisturbed. Potential for sensitive resources
23	4	6	42.3	Potential for developed recreation
25	Not Planned	4	0.7	Contains upland hardwoods and red cedar. Sensitive ecological resources are not present
27	3	4	266.4	Contains upland hardwoods. Sensitive resources are not present

Table D-42. Allocations by Parcel that are not Based on Existing Land Use Agreements and Commitments – Wheeler Reservoir

Parcel Number	Zone by Alternative		Acres	Description
	A	B		
5	4	3	11.2	The parcel is covered by a loblolly pine plantation, and scrub−shrub wetlands are located within the small inlet. Because of the shallow nature of the lake fronting this parcel, submersed aquatic plant beds are present during some years
11	5	6	91.3	Potential for developed recreation
18	3	4	0.9	Island tract which provides wetland habitat for both waterfowl and wetland furbearers. Sensitive species are not present
28	4	3	10.0	Mixed hardwood and pine forest with scrub−shrub wetlands along the shoreline. Potential for sensitive resources
33	4	3	7.6	Consists of riparian zone forest with some wetland characteristics. Potential for sensitive ecological species
35	4	3	195.4	Most of this parcel is being managed for perennial hay production and wildlife management while preserving its cultural resources. Forested riparian buffers have also been created. There is also an abundance of wetlands. Potential for sensitive ecological species
38	3	4	4.5	Contains wetlands and susceptible to flooding. Sensitive resources or not known to be present
41	3	4	7.3	Comprised of 3 small islands which support wetlands. Sensitive species are not known to be present
45	3	4	52.2	Contains forested and scrub-shrub wetlands. Sensitive species are not known to be present
48	4	6	5.3	Potential for developed recreation
50	3	4	137.6	Contains scrub-shrub wetlands. Sensitive species are not known to be present
56	6	5	44.6	Potential for industrial development
57	6	4	136.2	Contains wetlands and wildlife habitat, sensitive species are not known to be present
58	6	3	100.7	Long Oak Forest TVA SWA. Sensitive resources are present
62	4	3	68.3	Upland and bottomland forest with dispersed planted loblolly pines. Potential for sensitive resources
67	4	3	7.6	Forested limestone bluff
69	3	4	8.8	Forested limestone bluff
70	3	4	8.7	Forested limestone bluff
71	3	4	9.0	Forested limestone bluff
79	4	3	56.9	Bottomland hardwood forest with planted loblolly pine and dense privet understory. Contains sensitive resources
85	2	6	58.6	Potential for developed recreation
100	6	5	4.2	Potential for industrial development
106	3	4	42.4	Located on the perimeter of Hobbs Island. A mussel sanctuary is located upstream. Sensitive resources are not known to be present
110	4	3	275.3	Muddy Bottoms HPA and contains bottom land hardwood with scrub-shrub wetlands
114	3	4	40.7	Contains bottomland forest and wetlands. Sensitive species are not known to be present
122	4	3	16.8	Contains bottomland hardwood forest adjacent to forested limestone bluffs. Potential for sensitive resources
127	3	4	3.2	Supports hardwood forest. Sensitive species are not known to be

Parcel Number	Zone by Alternative		Acres	Description
	A	B		
				present.
139	3	4	3.3	The land cover is scrub hardwood and planted loblolly pine forest along an eroding riverbank. Sensitive species are not known to be present
141	3	4	46.7	The land cover is scrub hardwood and planted loblolly pine forest along an eroding riverbank. Also included scrub-shrub wetlands. Sensitive species are not known to be present
142	4	3	15.0	Limestone bluff with mixed hardwood and loblolly pine forest. Supports a variety of small game and nongame species, Including birds and reptiles. Sensitive species are not known to be present
143	3	5	1.1	Potential for industrial development
144	3	4	724.3	Supports diverse wildlife habitat. The state−listed species bald eagle (*Haliaeetus leucocephalus*) actively nests on this parcel
153	3	4	6.3	Contains good−to−excellent habitat for a variety of species, including wood ducks and other waterfowl, wading birds, and wetland furbearers. Sensitive species are not known to be present
154	3	4	2.2	Supports mixed pine and hardwood forest with unauthorized vegetation management. Sensitive species are not known to be present
161	4	3	614.9	Contains diverse forest types and wetlands which provides excellent wildlife habitat
162	4	6	3.4	Potential for developed recreation
163	4	6	7.9	Potential for developed recreation
168	3	4	717.2	Contains excellent habitat for a variety of species, Sensitive species are not known to be present
183	3	4	2.0	Comprised of a series of small sand and gravel islands located on the Tennessee River. The land cover consists of scattered scrub hardwoods and scrub−shrub wetlands. Sensitive species are not known to be present
187	3	4	209.2	Consists of forested wetlands, hardwood forest, internal sinkholes and springs, and scattered loblolly pine. Sensitive species are not known to be present
189	6	3	3.1	Contains sensitive resources
191	3	4	21.2	Contains hardwood forest with rock bluff. Sensitive species are not known to occur
199	6	4	121.2	Predominately comprised of a mature loblolly pine forest with mixed hardwoods and one small agricultural field near the southern end of the parcel. Sensitive resources are not known to be present
201	3	4	794.9	The land cover is a patchwork of pine and hardwood stands with intervening open pastureland and pockets of shrub and brush. The diversity of habitat supports a good small game population, and there are opportunities for further wildlife benefits through cooperative efforts in the management of the agricultural land. Sensitive species are not known to be present
204	3	5	396.3	Potential for industrial development

Table D-43. Flood Profiles – Chickamauga Reservoir Flood Profiles

Tennessee River - Chickamauga Reservoir, Flood Profiles.

River Mile	100-Year Flood	Flood Risk Profile*	Landmark
471.00	686.0	689.0	Chickamauga Dam
472.00	686.1	689.0	
473.00	686.1	689.0	
473.10	686.1	689.0	
474.00	686.2	689.0	
475.00	686.3	689.0	
475.21	686.3	689.0	
476.00	686.3	689.0	
477.00	686.4	689.0	
477.31	686.4	689.0	
478.00	686.4	689.0	
478.58	686.5	689.0	Wolftever Creek
479.00	686.5	689.0	
480.00	686.6	689.0	
480.45	686.6	689.0	Dallas Branch
481.00	686.6	689.0	
481.52	686.6	689.0	
482.00	686.7	689.0	
483.00	686.8	689.0	
483.62	686.9	689.0	
484.00	686.9	689.0	
485.00	687.0	689.0	
485.72	687.1	689.0	
486.00	687.1	689.0	
487.00	687.2	689.0	
487.50	687.2	689.0	Soddy Creek
487.83	687.2	689.0	
488.00	687.3	689.0	
489.00	687.3	689.0	
489.63	687.4	689.1	Possum Creek
489.93	687.4	689.2	
490.00	687.4	689.2	
491.00	687.5	689.3	
492.00	687.6	689.4	
492.04	687.6	689.4	
493.00	687.7	689.5	
494.00	687.7	689.6	
494.14	687.8	689.6	
494.25	687.8	689.6	Grasshopper Creek
495.00	687.8	689.7	Sale Creek
496.00	687.9	689.8	
496.24	687.9	689.9	
497.00	688.0	690.0	
498.00	688.1	690.1	
498.35	688.2	690.2	

Tennessee River - Chickamauga Reservoir, Flood Profiles.

River Mile	100-Year Flood	Flood Risk Profile*	Landmark
499.00	688.3	690.3	
499.02	688.3	690.4	Tennessee Highway 60
499.43	688.4	690.4	Hiwassee River
499.52	688.4	690.5	Blythe Ferry
500.00	688.5	690.6	
500.45	688.6	690.7	
501.00	688.7	690.8	
502.00	688.8	691.0	
502.55	688.9	691.1	
503.00	689.0	691.3	
504.00	689.2	691.5	
504.41	689.3	691.7	Richland Creek
504.66	689.4	691.7	
505.00	689.5	691.8	
505.27	689.6	691.9	Mud Creek
506.00	689.7	692.2	
506.76	689.9	692.4	
507.00	690.0	692.5	
508.00	690.3	692.8	
508.86	690.5	693.1	
509.00	690.5	693.1	
510.00	690.8	693.5	
510.97	691.1	693.8	
511.00	691.1	693.8	
512.00	691.4	694.2	
513.00	691.7	694.5	
513.07	691.7	694.6	
514.00	692.0	694.9	
514.65	692.2	695.2	Goodfield Creek
515.00	692.3	695.3	
515.18	692.4	695.4	
516.00	692.7	695.7	
517.00	693.0	696.1	
517.28	693.1	696.2	
517.90	693.3	696.4	Tennessee Highway 30
517.97	693.3	696.4	Washington Ferry
518.00	693.3	696.4	
519.00	693.6	696.7	
519.38	693.7	696.8	
519.44	693.7	696.8	Clear Creek
520.00	693.9	697.1	
521.00	694.2	697.5	
521.49	694.4	697.6	
522.00	694.6	697.8	
523.00	695.0	698.2	
523.59	695.2	698.5	
524.00	695.4	698.8	

Tennessee River - Chickamauga Reservoir, Flood Profiles.

River Mile	100-Year Flood	Flood Risk Profile*	Landmark
524.56	695.7	699.1	Sewee Creek
525.00	695.9	699.4	
525.69	696.3	699.9	
526.00	696.4	700.0	
526.78	696.7	700.4	Yellow Creek
527.00	696.7	700.5	
527.80	697.0	700.8	
528.00	697.1	700.9	
529.00	697.6	701.4	
529.90	698.0	701.8	Watts Bar Dam

Notes:

1. All Elevations are NGVD 1929
2. River miles in bold indicate surveyed cross sections
3. *The Flood Risk Profile is Equal to the 500-Year Flood From Mile 489.0 Upstream to Watts Bar Dam
4. Computed by TVA in 1980

source file: chickamauga_profiles_for_Land_Plan_2016_final.xlsx
source file: Work\Flood Risk\Reservoir Flood Risk\Reservoir Profiles\Tennessee River Flood Risk Profiles\ chickamauga frp.xls

Table D-44. Flood Profiles – Fort Loudoun Reservoir

Tennessee River – Fort Loudoun Flood Profiles				
River Mile	**100-Year Flood**		**Flood Risk Profile****	**Landmark**
602.30	816.0		817.0	Fort Loudoun Dam
602.96	816.0		817.0	Fork Creek
603.00	816.0		817.0	
604.00	816.0		817.0	
604.36	816.0		817.0	
605.00	816.0		817.0	
606.00	816.0		817.1	
606.43	816.0		817.1	
606.60	816.0		817.1	Cloyd Creek
607.00	816.0		817.2	
608.00	816.1		817.3	
608.54	816.1		817.3	
609.00	816.1		817.3	
610.00	816.1		817.4	
610.63	816.1		817.4	
611.00	816.1		817.5	
612.00	816.2		817.6	
612.10	816.2		817.6	Gallagher Creek
612.68	816.3		817.7	
613.00	816.3		817.8	
614.00	816.3		817.9	
614.75	816.3		818.0	
615.00	816.3		818.1	
616.00	816.4		818.2	
616.45	816.5		818.3	Turkey Creek
616.86	816.5		818.4	
617.00	816.5		818.4	
617.18	816.5		818.4	Sinking Creek
618.00	816.5		818.5	
618.94	816.5		818.5	
619.00	816.5		818.5	
620.00	816.7		818.9	
621.00	816.8		819.2	
621.02	816.8		819.2	
622.00	816.9		819.3	
623.00	816.9		819.5	
623.10	816.9		819.5	
624.00	816.9		819.6	
625.00	817.0		819.8	
625.28	817.0		819.8	
625.40	817.0		819.8	Lackey Creek
626.00	817.1		819.9	
626.85	817.2		820.0	Sinking Creek

Tennessee River – Fort Loudoun Flood Profiles				
River Mile	**100-Year Flood**		**Flood Risk Profile****	**Landmark**
627.00	817.2		820.0	
627.16	817.2		820.0	
628.00	817.3		820.3	
629.00	817.5		820.6	
629.31	817.5		820.7	
630.00	817.6		820.9	
630.10	817.6		821.0	Pellissippi Parkway
631.00	817.7		821.3	
631.42	817.8		821.4	
632.00	817.8		821.5	
633.00	817.9		821.6	
633.50	817.9		821.7	
634.00	818.0		821.8	
635.00	818.1		822.1	
635.54	818.2		822.3	Little River
635.60	818.2		822.3	
636.00	818.2		822.3	
637.00	818.3		822.4	
637.56	818.3		822.5	Knob Creek
637.67	818.3		822.5	
638.00	818.4		822.6	
639.00	818.5		822.8	
639.74	818.6		822.9	
639.88	818.6		823.0	Fourth Creek
640.00	818.7		823.0	
641.00	818.9		823.3	
641.77	819.1		823.6	
642.00	819.2		823.7	
643.00	819.5		824.2	
643.89	819.7		824.6	
644.00	819.8		824.7	
645.00	820.3		825.3	
645.10	820.3		825.4	U. S. Highway 129
645.10	820.3		825.5	
645.88	820.4		825.6	Third Creek
645.89	820.4		825.6	
646.00	820.5		825.8	
646.60	821.0		826.6	L & N Railroad
646.60	821.0		826.6	
646.66	821.1		826.7	Goose Creek
647.00	821.3		827.1	
647.22	821.5		827.4	Second Creek
647.24	821.5		827.4	Southern Railroad
647.24	821.5		827.4	

Tennessee River – Fort Loudoun Flood Profiles				
River Mile	**100-Year Flood**		**Flood Risk Profile****	**Landmark**
647.40	821.5		827.5	Henley Street
647.40	821.5		827.5	
647.70	821.6		827.7	Gay Street
647.70	821.7		827.7	
647.80	821.7		827.7	First Creek
648.00	821.7		827.7	
648.06	821.7		827.7	
648.70	822.3		828.6	South Knoxville Bridge
649.00	822.6		829.0	
649.13	822.7		829.1	Williams Creek
650.00	823.6		830.3	
650.14	823.7		830.5	
651.00	824.5		831.4	
652.02	825.4		832.4	

Notes:

All Elevations are NGVD 1929

River miles in bold indicate surveyed cross sections

*Downstream and Upstream at Bridges

**The Flood Risk Profile is Equal to the 500-Year Flood

Computed by TVA in 1997

source file:
Fort_Loudoun_profiles_for_Land_Plan_2016_final.xlsx

Table D-45. Flood Profiles – Great Falls Reservoir

Caney Fork River – Great Falls Reservoir Flood Profiles			
River Mile	**100-Year Flood**	**500-Year Flood**	**Landmark**
91.1	815.5	820.0	Great Falls Dam
91.2	815.5	820.0	Collins River
91.6	815.7	820.2	
92.0	815.7	820.3	
92.1	815.7	820.3	
92.4	815.8	820.4	
92.7	815.8	820.4	Rocky River
93.0	815.9	820.5	
93.4	815.9	820.6	
93.9	816.0	820.7	
94.0	816.0	820.7	
94.4	816.1	820.8	
94.9	816.2	820.9	
95.0	816.2	820.9	
95.5	816.4	821.1	
96.0	816.5	821.3	
96.6	816.6	821.4	
96.9	816.7	821.5	
97.0	816.7	821.5	
97.4	816.8	821.7	
97.9	817.0	821.8	
98.0	817.0	821.8	
98.3	817.1	822.0	
98.8	817.3	822.2	
99.0	817.4	822.3	
99.4	817.5	822.4	
99.9	817.8	822.7	
100.0	817.8	822.8	
100.3	817.9	822.9	
100.7	818.1	823.2	
101.0	818.2	823.2	
101.1	818.2	823.3	
101.6	818.4	823.4	
101.8	818.4	823.5	
102.0	818.5	823.6	
102.5	818.7	823.8	
102.8	818.8	823.9	
103.0	818.8	824.0	
103.5	819.0	824.1	
104.0	819.3	824.4	
104.5	819.5	824.7	
104.6	819.5	824.7	Calfkiller River
104.9	819.9	825.1	

Caney Fork River – Great Falls Reservoir Flood Profiles			
River Mile	**100-Year Flood**	**500-Year Flood**	**Landmark**
105.0	819.9	825.2	
105.8	820.2	825.5	
106.0	820.3	825.6	
106.1	820.3	825.6	
106.5	820.5	825.8	
106.9	820.6	826.0	
107.0	820.7	826.0	
107.7	821.0	826.4	
107.9	821.1	826.5	Cane Creek
108.0	821.2	826.6	
108.1	821.2	826.7	
108.3	821.2	826.7	
108.9	821.5	826.9	
109.0	821.6	827.0	
109.4	821.8	827.2	
109.6	821.9	827.4	Hickory Valley Branch
109.9	822.2	827.7	Limit of study

Notes:

All Elevations are NGVD 1929

River miles in bold indicate surveyed cross sections

*Downstream and Upstream at Bridges

**The Flood Risk Profile is Equal to the 500-Year Flood

Computed by TVA in 2011

source file:
great_falls_profiles_for_Land_Plan_2016_final.xlsx

Table D-46. Flood Profiles –Kentucky Reservoir

Tennessee River – Kentucky Reservoir Flood Profiles			
River Mile	**100-Year Flood**	**Flood Risk Profile****	**Landmark**
22.40	375.0	375.0	Kentucky Dam
25.30	375.0	375.0	Barkley Canal
30.62	375.0	375.0	Bear Creek
38.48	375.0	375.0	Jonathan Creek
41.74	375.0	375.0	U.S. Highway 68
42.30	375.0	375.0	Ledbetter Creek
45.40	375.0	375.0	Anderson Creek
52.00	375.0	375.0	Blood River
54.30	375.0	375.0	Boyds Branch
62.70	375.0	375.0	Cypress Creek
66.30	375.0	375.0	U.S. Highway 79
67.03	375.0	375.0	Big Sandy River
68.50	375.0	375.0	Standing Rock Creek
73.60	375.0	375.0	Leatherwood Creek
75.20	375.0	375.0	Lick Creek
76.20	375.0	375.0	Hurricane Creek
78.29	375.0	375.0	Railroad (formerly L&N Railroad)
78.50	375.0	375.0	Cane Creek
79.80	375.0	375.0	Crooked Creek
81.50	375.0	375.0	Whiteoak Creek
83.75	375.0	375.0	Little Crooked Creek
85.75	375.0	375.0	Turkey Creek
86.40	375.0	375.0	Sulphur Creek
88.60	375.0	375.0	Big Richland Creek
94.00	375.0	375.0	Little Dry Creek
96.07	375.0	375.0	Trace Creek
100.50	375.0	375.0	U.S. Highway 70
100.80	375.0	375.0	Indian Creek
103.50	375.0	375.0	Birdsong Creek
110.77	375.0	375.0	Duck River
112.69	375.0	375.0	Eagle Creek
115.44	375.0	375.0	Blue Creek
116.07	375.0	375.0	Interstate 40
117.14	375.0	375.0	
118.00	375.0	375.2	
118.71	375.0	375.3	
119.00	375.0	375.4	
119.27	375.0	375.4	Morgan Creek
120.00	375.0	375.4	
120.03	375.0	375.6	
121.00	375.0	375.9	
121.54	375.0	376.0	Crooked Creek
121.90	375.0	376.1	

Tennessee River – Kentucky Reservoir Flood Profiles			
River Mile	**100-Year Flood**	**Flood Risk Profile****	**Landmark**
122.00	375.0	376.2	
122.39	375.0	376.5	
122.75	375.3	376.8	
123.00	375.4	376.9	
124.00	375.7	377.2	
124.32	375.8	377.3	Toms Creek
124.87	376.0	377.5	Deer Creek
124.99	376.0	377.5	
125.00	376.0	377.5	
126.00	376.2	377.7	
127.00	376.4	378.0	
127.09	376.4	378.0	
127.68	376.7	378.3	Lick Creek
128.00	376.8	378.4	
129.00	377.3	378.9	
129.50	377.5	379.1	Cub Creek
129.75	377.6	379.2	
130.00	377.7	379.3	
130.90	378.0	379.6	Lick Creek
131.00	378.0	379.6	
131.17	378.1	379.7	
132.00	378.4	380.0	
132.04	378.4	380.0	Parrish Branch
132.95	378.7	380.4	Spring Creek
133.00	378.7	380.4	
133.37	378.8	380.5	
134.00	379.0	380.6	
134.82	379.2	380.8	
134.93	379.2	380.9	State Routes 100 and 20
134.93	379.3	380.9	State Routes 100 and 20
135.00	379.3	380.9	
135.02	379.3	380.9	
135.25	379.5	381.2	
135.74	379.7	381.4	Beech River
136.00	379.8	381.5	
136.53	380.0	381.7	Cypress Creek
137.00	380.2	381.9	
137.56	380.4	382.1	
138.00	380.6	382.3	
138.33	380.7	382.4	Marsh Creek
139.00	380.9	382.6	
139.17	381.0	382.7	
139.96	381.3	383.0	Dry Branch
140.00	381.3	383.0	
141.00	381.6	383.4	

Tennessee River – Kentucky Reservoir Flood Profiles			
River Mile	**100-Year Flood**	**Flood Risk Profile****	**Landmark**
141.40	381.8	383.6	Cedar Creek
141.75	381.9	383.7	
142.00	382.0	383.8	
143.00	382.4	384.2	
143.70	382.6	384.5	
144.00	382.7	384.6	
145.00	382.9	384.8	
145.94	383.1	385.0	
146.00	383.1	385.0	
147.00	383.6	385.5	
148.00	384.1	386.0	
148.04	384.1	386.0	
149.00	384.5	386.4	
150.00	384.9	386.9	
150.46	385.1	387.1	
151.00	385.3	387.3	
152.00	385.6	387.5	
152.23	385.7	387.6	
153.00	386.0	388.0	
154.00	386.5	388.5	
154.32	386.6	388.6	
155.00	386.8	388.8	
156.00	387.1	389.1	
156.46	387.2	389.2	
157.00	387.3	389.3	
157.86	387.5	389.5	
158.00	387.6	389.6	
158.51	387.9	389.9	
158.54	387.9	389.9	Roach Creek
159.00	388.1	390.1	
160.00	388.5	390.5	
160.30	388.6	390.6	
161.00	388.8	390.9	
162.00	389.2	391.2	
162.70	389.4	391.5	
163.00	389.5	391.6	
164.00	390.0	392.1	
164.80	390.3	392.4	Hardin Creek
165.00	390.4	392.5	
165.40	390.5	392.6	Turnbo Creek
166.00	390.6	392.7	
166.89	390.9	393.0	
167.00	391.0	393.1	
167.94	391.4	393.5	Stewman Creek
168.00	391.4	393.5	

Tennessee River – Kentucky Reservoir Flood Profiles			
River Mile	**100-Year Flood**	**Flood Risk Profile****	**Landmark**
168.35	391.6	393.7	
168.36	391.6	393.7	Indian Creek
169.00	391.8	393.9	
170.00	392.2	394.3	
171.00	392.5	394.6	
171.06	392.5	394.6	
171.85	392.8	394.9	Doe Creek
172.00	392.8	395.0	
173.00	393.1	395.4	
173.18	393.2	395.5	
173.54	393.3	395.6	White Oak Creek
174.00	393.5	395.7	
175.00	393.8	396.0	
175.27	393.9	396.1	
176.00	394.0	396.2	
177.00	394.2	396.4	
177.37	394.3	396.4	
178.00	394.7	396.8	
178.26	394.8	397.0	Horse Creek
179.00	395.3	397.5	
179.94	395.8	398.1	
180.00	395.8	398.1	
181.00	396.0	398.2	
181.56	396.1	398.3	
182.00	396.2	398.4	
183.00	396.3	398.6	
184.00	396.5	398.8	
184.08	396.5	398.8	
185.00	396.7	399.0	
185.25	396.7	399.0	
185.87	396.8	399.1	Beason Creek
186.00	396.8	399.1	
187.00	397.0	399.2	
187.84	397.1	399.3	
188.00	397.1	399.3	
189.00	397.3	399.5	
189.90	397.4	399.6	
189.94	397.4	399.6	U.S. Route 64 - State Route 69
189.94	397.7	400.0	U.S. Route 64 - State Route 69
190.00	397.7	400.0	
191.00	397.9	400.2	
191.52	398.0	400.3	Mud Creek
191.97	398.1	400.4	
192.00	398.1	400.4	
193.00	398.2	400.5	

Tennessee River – Kentucky Reservoir Flood Profiles			
River Mile	**100-Year Flood**	**Flood Risk Profile****	**Landmark**
193.73	398.3	400.5	
194.00	398.3	400.5	
195.00	398.4	400.7	
195.38	398.4	400.7	
196.00	398.5	400.8	
197.00	398.6	400.9	
197.40	398.6	400.9	Snake Creek
198.00	398.7	401.0	
198.02	398.7	401.0	
199.00	398.9	401.2	
200.00	399.1	401.4	
200.42	399.2	401.5	
200.50	399.2	401.5	Lick Creek
201.00	399.4	401.7	
202.00	399.8	402.0	
202.33	399.9	402.1	
203.00	400.1	402.3	
204.00	400.4	402.6	
204.03	400.4	402.6	
205.00	400.7	402.9	
205.35	400.9	403.1	Chambers Creek
205.47	400.9	403.1	
206.00	401.1	403.3	
206.72	401.4	403.6	Pickwick Dam

Notes:

All Elevations are NGVD 1929
River miles in bold indicate surveyed cross sections
*Downstream and Upstream at Bridges
**The Flood Risk Profile is Equal to the 500-Year Flood

Computed by TVA in 1994
source file:
kentucky_profiles_for_Land_Plan_2016_final.xlsx

Table D-47. Flood Profiles –Nickajack Reservoir

Tennessee River – Nickajack Reservoir Flood Profiles			
River Mile	**100-Year Flood**	**Flood Risk Profile***	**Landmark**
424.70	635.0	639.0	Nickajack Dam
425.00	635.0	639.0	
426.00	635.0	639.0	
426.80	635.0	639.0	
427.00	635.0	639.0	
428.00	635.0	639.0	
428.91	635.0	639.0	
429.00	635.0	639.0	
429.16	635.0	639.0	Interstate 24 Bridge
429.68	635.0	639.0	Running Water Creek
429.71	635.0	639.0	Tennessee State Route 2 Bridge
430.00	635.0	639.0	
431.00	635.0	639.0	
431.01	635.0	639.0	
432.00	635.0	639.0	
433.00	635.0	639.0	
433.12	635.0	639.0	
434.00	635.0	639.0	
435.00	635.0	639.0	
435.22	635.0	639.0	
436.00	635.0	639.0	
437.00	635.0	639.0	
437.33	635.0	639.0	
438.00	635.0	639.0	
438.38	635.0	639.0	
439.00	635.3	639.0	
439.43	635.5	639.0	
440.00	635.8	639.0	
440.48	636.1	639.0	
441.00	636.3	639.0	
441.54	636.6	639.2	
442.00	636.9	639.5	
442.59	637.2	639.9	
443.00	637.4	640.3	
443.64	637.8	640.8	
444.00	637.9	641.0	
444.62	638.2	641.4	Main Outlet - Raccoon Mountain
444.70	638.3	641.4	
445.00	638.7	642.1	
445.75	639.9	643.8	
446.00	640.1	644.0	
446.80	640.7	644.8	

Tennessee River – Nickajack Reservoir Flood Profiles			
River Mile	**100-Year Flood**	**Flood Risk Profile***	**Landmark**
447.00	640.9	645.0	
447.85	641.7	646.0	
448.00	641.9	646.3	
448.90	643.3	647.9	
449.00	643.4	648.1	
449.95	644.9	650.0	
450.00	645.0	650.1	
451.00	647.0	652.5	
451.71	648.6	654.3	Suck Creek
452.00	649.2	655.1	
452.06	649.3	655.3	
453.00	650.4	656.5	
453.11	650.5	656.6	
454.00	651.3	657.6	
454.16	651.4	657.7	
455.00	651.8	658.2	
455.21	651.9	658.3	
455.35	652.0	658.4	Mountain Creek
456.00	652.4	658.8	
456.27	652.6	659.0	
457.00	652.9	659.3	
458.00	653.4	659.8	
458.37	653.6	660.0	
459.00	654.0	660.4	
459.85	654.5	661.0	Lookout Creek
460.00	654.6	661.1	
460.48	655.0	661.4	
460.63	655.0	661.5	Chattanooga Creek
461.00	655.2	661.7	
462.00	655.8	662.3	
462.58	656.1	662.6	
463.00	656.3	662.9	
463.75	656.8	663.3	P.R. Olgiati Bridge
464.00	656.9	663.5	
464.15	657.0	663.5	Market Street Bridge
464.20	657.0	663.6	Walnut Street Bridge
464.69	657.3	663.9	
465.00	657.5	664.0	
465.30	657.6	664.2	Citico Creek
466.00	658.0	664.5	
466.79	658.5	665.0	
467.00	658.6	665.1	
468.00	659.0	665.5	
468.22	659.1	665.6	South Chickamauga Creek

Tennessee River – Nickajack Reservoir Flood Profiles			
River Mile	**100-Year Flood**	**Flood Risk Profile***	**Landmark**
468.90	659.4	665.8	
469.00	659.4	665.9	
470.00	659.7	666.1	
470.60	659.8	666.2	Southern Railway Bridge
470.85	659.9	666.3	North Chickamauga Creek
471.00	659.9	666.3	Chickamauga Dam

Notes:

All Elevations are NGVD 1929

River miles in bold indicate surveyed cross sections

*Downstream and Upstream at Bridges

*The Flood Risk Profile is Equal to the 500-Year Flood Elevation

Computed by TVA in 2001
source file:
nickajack_profiles_for_Land_Plan_2016_final.xlsx

Table D-48. Flood Profiles – Wheeler Reservoir

Tennessee River – Wheeler Reservoir Flood Profiles			
River Mile	**100-Year Flood**	**Flood Risk Profile****	**Landmark**
274.90	557.3	557.3	Wheeler Dam
275.00	557.3	557.3	
275.42	557.3	557.3	Second Creek
276.00	557.3	557.3	
276.96	557.3	557.3	
277.00	557.3	557.3	
277.17	557.3	557.3	First Creek
278.00	557.3	557.3	
279.00	557.3	557.3	
279.02	557.3	557.3	
280.00	557.3	557.3	
281.00	557.3	557.3	
281.08	557.3	557.3	
282.00	557.3	557.3	
283.00	557.3	557.3	Spring Creek
283.13	557.3	557.3	
284.00	557.3	557.3	
284.28	557.3	557.3	Elk River
285.00	557.3	557.3	
285.05	557.3	557.3	Goldfield Creek
285.19	557.3	557.3	
286.00	557.3	557.3	
287.00	557.3	557.3	
287.25	557.3	557.3	
288.00	557.3	557.3	
289.00	557.3	557.3	
289.30	557.3	557.3	Coxey Creek
289.31	557.3	557.3	
290.00	557.3	557.3	
291.00	557.3	557.3	
291.37	557.3	557.3	
292.00	557.3	557.3	
293.00	557.3	557.3	
293.43	557.3	557.3	
293.60	557.3	557.3	Mallard Creek
294.00	557.3	557.3	BFN Site
294.46	557.3	557.3	
295.00	557.3	557.4	
295.48	557.3	557.5	
296.00	557.3	557.7	
296.25	557.3	557.7	Fox Creek
297.00	557.3	557.9	

Tennessee River – Wheeler Reservoir Flood Profiles			
River Mile	**100-Year Flood**	**Flood Risk Profile****	**Landmark**
297.54	557.3	558.0	
298.00	557.4	558.2	
298.10	557.4	558.2	Round Island Creek
299.00	557.6	558.4	
299.60	557.8	558.6	
300.00	557.9	558.7	
301.00	558.1	558.9	
301.14	558.1	558.9	Swan Creek
301.48	558.1	559.0	Bakers Creek
301.66	558.2	559.0	
302.00	558.3	559.1	
302.88	558.5	559.3	Dry Branch
303.00	558.5	559.4	
303.72	558.7	559.6	
304.00	558.9	559.7	
305.00	559.3	560.2	
305.78	559.6	560.6	
306.00	559.8	560.7	
307.00	560.3	561.3	
307.83	560.8	561.8	
308.00	560.9	561.9	
308.40	561.1	562.1	Flint Creek
309.00	561.5	562.5	
309.53	561.8	562.9	Interstate 65
309.55	561.8	562.9	Interstate 65
309.89	562.1	563.1	
310.00	562.1	563.2	
310.67	562.6	563.7	Limestone Creek
311.00	562.8	563.9	
311.95	563.4	564.6	
312.00	563.5	564.7	
313.00	564.2	565.5	
314.00	564.8	566.2	
314.01	564.9	566.2	
315.00	565.7	567.2	
316.00	566.5	568.1	
316.07	566.5	568.1	
317.00	567.0	568.6	
317.28	567.1	568.8	Blackwell Run
318.00	567.5	569.2	
318.13	567.6	569.3	
319.00	568.0	569.8	
319.13	568.1	569.8	Cotaco Creek
320.00	568.5	570.3	
320.18	568.6	570.4	

Tennessee River – Wheeler Reservoir Flood Profiles			
River Mile	**100-Year Flood**	**Flood Risk Profile****	**Landmark**
320.91	568.9	570.8	Indian Creek
321.00	569.0	570.8	
322.00	569.4	571.3	
322.24	569.5	571.4	
323.00	569.9	571.8	
324.00	570.4	572.4	
324.30	570.5	572.5	
325.00	570.9	572.9	
326.00	571.5	573.5	
326.36	571.7	573.7	
327.00	572.0	574.1	
328.00	572.5	574.6	
328.42	572.7	574.8	
329.00	573.1	575.3	
330.00	573.9	576.2	
330.48	574.2	576.6	
331.00	574.5	576.8	
332.00	574.9	577.3	
332.53	575.2	577.6	
332.89	575.3	577.7	
333.00	575.3	577.7	
333.30	575.4	577.8	US Highway 231
333.30	575.4	577.8	
333.32	575.5	577.8	
333.47	575.5	577.9	Aldridge Creek
333.87	575.6	578.0	
334.00	575.7	578.2	
334.59	576.2	578.6	
335.00	576.4	578.8	
336.00	576.7	579.1	
336.65	577.0	579.4	
337.00	577.1	579.5	
338.00	577.5	579.9	
338.71	577.8	580.2	
339.00	577.9	580.3	
339.04	577.9	580.3	Flint River
340.00	578.2	580.6	
340.77	578.4	580.9	
341.00	578.5	581.0	
342.00	579.0	581.5	
342.83	579.4	581.9	
343.00	579.4	582.0	
343.23	579.5	582.0	Paint Rock River
344.00	579.6	582.2	
344.88	579.8	582.5	

Tennessee River – Wheeler Reservoir Flood Profiles			
River Mile	**100-Year Flood**	**Flood Risk Profile****	**Landmark**
345.00	579.9	582.5	
346.00	580.1	582.8	
346.94	580.4	583.1	
347.00	580.4	583.1	
347.20	580.5	583.2	Shoal Creek
348.00	580.8	583.5	
349.00	581.1	583.9	Guntersville Dam

Notes:

All Elevations are NGVD 1929
River miles in bold indicate surveyed cross sections
*Downstream and Upstream at Bridges
**The Flood Risk Profile is Equal to the 500-Year Flood
Computed by TVA in 2004
source file:
Wheeler_profiles_for_Land_Plan_2016_final.xlsx

Table D-49. Flood Profiles – Wilson Reservoir

Tennessee River – Wilson Reservoir Flood Profiles			
River Mile	**100-Year Flood**	**Flood Risk Profile***	**Landmark**
259.40	508.0	508.0	Wilson Dam
259.97	508.0	508.0	
260.00	508.0	508.0	
261.00	508.0	508.0	
261.12	508.0	508.0	
262.00	508.0	508.0	
262.23	508.0	508.0	
262.85	508.0	508.0	McKiernan Creek
263.00	508.0	508.0	
264.00	508.0	508.0	
264.04	508.0	508.0	
264.37	508.0	508.0	Shoal Creek
265.00	508.0	508.1	
265.32	508.0	508.1	
266.00	508.0	508.1	
266.33	508.0	508.1	Sixmile Creek
267.00	508.1	508.1	
267.40	508.1	508.1	
268.00	508.1	508.1	
269.00	508.1	508.1	
269.09	508.1	508.1	
270.00	508.1	508.2	
271.00	508.2	508.2	
271.02	508.2	508.2	
272.00	508.4	508.5	
272.20	508.4	508.5	Town Creek
272.96	508.6	508.7	
273.00	508.6	508.8	
273.10	508.7	508.9	Bluewater Creek
274.00	509.6	510.1	
274.10	509.7	510.2	Big Nance Creek
274.90	510.6	511.2	Wheeler Dam

Notes:

All Elevations are NGVD 1929

River miles in bold indicate surveyed cross sections

*The Flood Risk Profile is Equal to the 500-Year Flood

Computed by TVA in 1984

source file:
Wilson_profiles_for_Land_Plan_2016_final.xlsx

Table D-50. Natural Areas Managed by All Entities – Chickamauga Reservoir

Natural Area	Acres
TVA Natural Areas	
Armstrong Bend TVA Habitat Protection Area	30.2
Big Ridge TVA Small Wild Area	226.1
Blythe Ferry TVA Habitat Protection Area	8.9
Butcher Bluff TVA Habitat Protection Area	15.3
Chickamauga Shoreline TVA Habitat Protection Area	54.4
Chigger Point TVA Habitat Protection Area	15.3
Eagle Roost TVA Habitat Protection Area	9.8
Eaves Bluff TVA Habitat Protection Area	3.7
Fairview Slopes TVA Habitat Protection Area	191.7
Grasshopper Creek TVA Habitat Protection Area	202.1
Johnson Bottoms TVA Habitat Protection Area	40.4
Murphy Hill TVA Habitat Protection Area	195.6
Possum Creek TVA Habitat Protection Area	78.3
Soddy Creek TVA Habitat Protection Area	35.8
Three B TVA Habitat Protection Area	45.4
Ware Branch Bend TVA Habitat Protection Area	50.2
Other Managed Areas on TVA Lands	
Big Ridge Registered State Natural Area	202.4
Blythe Ferry - Land Trust Of TN Conservation Easement	69.1
Blythe Ferry State Wildlife Observation Area	416.1
Blythe Ferry Wildlife Management Area	356.9
Booker T Washington State Park	357.6
Buckner 1936/Raht Ferry Road Cave	6.5
Chickamauga Reservoir State Mussel Sanctuary	1374.1
Chickamauga Wildlife Management Area	3489.2
Goose Club	90.3
Hamilton County Park	322
Harrison Bay State Park	1844.4
Hiwassee Refuge State Wildlife Management Area	8054
Ledford Island Wildlife Management Area	99.3
Murphy Slough Protection Planning Site	190.8
Nickajack Reservoir State Mussel Sanctuary	777.1
North Chickamauga Creek Greenway	140.3
River Ridge Farms Conservation Easement - Land Trust For TN	154.1

Soddy Municipal Park	62.7
Sugar Creek State Wildlife Observation Area	239.1
Trail Of Tears (Section)	5
University Of Tennessee Friendship Forest	600
Yuchi Wildlife Management Area	2364.5

Table D-51. Natural Areas Managed by All Entities – Fort Loudoun Reservoir

Natural Area	Acres
Other Managed Areas on TVA Lands	
Admiral Farragut Park	68.0
Anchor Park	11.0
Carl Cowan Park	30.5
Concord Cove Park	29.5
Concord Park	570.0
Concord Point Park	11.9
Farragut Park	37.0
Fort Loudoun State Wildlife Management Area	1242.7
Ft. Loudoun Reservoir Reservation	14005.2
Holston River Park	44.0
I.C. King County Park	189.8
Keller Bend	18.4
Lake Front Rd Park	8.3
Lenoir City Park	47.6
Louisville Park	20.1
Lyons Bend Rd Park	46.3
Maloney Rd Park	15.7
Marine Park	2.8
Rogers Island Rd Park	19.1
Sequoyah Hills Park	75.1
Volunteer Landing Park	11.1
Watts Bar Reservoir Reservation	43561.5
Wrights Ferry Rd Park	16.2

Table D-52. Natural Areas Managed by All Entities – Great Falls Reservoir

Natural Area	Acres
Other Managed Areas on TVA Lands	
Center Hill Lake - Us Army Corps Of Engineers	39704.2
Great Falls Reservoir Reservation	1300.9
Rock Island State Park	1208.9

Table D-53. Natural Areas Managed by All Entities – Kentucky Reservoir

Natural Area	Acres
TVA Natural Areas	
Alley Bluff TVA Habitat Protection Area	71.0
Blood River TVA Habitat Protection Area	146.3
Clendenin Creek TVA Habitat Protection Area	23.2
Crooked Creek Cemetery TVA Small Wild Area	50.4
Henson Branch Rare Histosol Wetland TVA Habitat Protection Area	89.9
Jennings Bluff Proposed TVA Habitat Protection Area	88.1
Lady's Bluff TVA Small Wild Area	44.7
Mccuiston Woods TVA Habitat Protection Area	51.3
Paint Rock Bluff TVA Small Wild Area	69.7
Panther Creek Swamp TVA Habitat Protection Area	144.2
Tribble Woods TVA Habitat Protection Area	33.9
Tupelo Gum Swamp TVA Habitat Protection Area	65.3
Wilkinson Pond Slough Proposed TVA Habitat Protection Area	53.9
Other Managed Areas on TVA Lands	
Bailey Fork Wetland - TWRA	158.5
Bear Creek Rookery State Natural Area	76.4
Beechy Creek Wildlife Management Area	97.0
Big Sandy Municipal Park	20.3
Britton Ford Natural Area	574.9
Calloway County Seep Swamp Potential National Natural Landmark	254.5
Camden State Wildlife Management Area	3721.7
Camp Mack Morris Boy Scout Camp	214.9
Cypress Creek Swamp (Marshall County)	1221.3
Cypress Creek Swamp	148.1
Cypress Creek Swamp Fee - The Nature Conservancy - Fee Ownership	424.1
Cypress Pond Refuge - TWRA	585.5
Devil's Backbone Biosphere Reserve Core Area	11021.1
Duck River Bottoms State Wildlife Observation Area	4655.2
Eva Park	23.5
Fluted Kidneyshell Designated Critical Habitat	28571.2
Hancock Biological Station	9.0
Harmon Creek Wildlife Management Area	934.6
Holly Fork Wildlife Management Area	173.5
Hugh Link Farm Site State Archaeological Area	530.0
Johnsonville State Historic Area	544.0

Natural Area	Acres
Kenlake Resort State Park	1195.0
Kentucky Dam State Nongame Wildlife Natural Area	95.1
Kentucky Dam Village State Resort Park	1365.9
Kentucky Lake Wildlife Management Area (Ky)	4131.8
Kentucky Reservoir Mussel Management Study Area	1703.5
Kentucky Reservoir No. 1 State Mussel Sanctuary	186.6
Kentucky Reservoir Reservation	135395.6
Land Between The Lakes National Recreation Area - Ownership Boundaries	0.0
Land Between The Lakes Wildlife Management Area - TWRA	64028.6
Lick Creek Wildlife Management Area	88.7
Link Farm	530.0
Mousetail Landing State Park	1306.0
Nathan Bedford Forrest State Historical Area/Park/Wildlife Management Area	2720.4
New Hope State Wildlife Management Area	91.9
Paint Rock Bluff	68.4
Paris Landing State Park	789.2
Perryville Wildlife Management Area	148.9
Rabbitsfoot Designated Critical Habitat	11948.6
Slabside Pearlymussel Designated Critical Habitat	23519.0
Tennessee National Migratory Wildlife Refuge/Big Sandy Unit	21546.5
Tennessee National Migratory Wildlife Refuge/Busseltown Unit	3426.1
Tennessee National Migratory Wildlife Refuge/Duck River Unit	26765.5
Tennessee National Wildlife Refuge	51918.2
Tennessee River Outstanding State Resource Water	1659.2
West Sandy State Wildlife Management Area	4520.7
White Oak Wildlife Management Area	6542.9

Table D-54. Natural Areas Managed by All Entities – Nickajack Reservoir

Natural Area	Acres
TVA Natural Areas	
Huff Branch TVA Habitat Protection Area	20.7
Little Cedar Mountain TVA Habitat Protection Area	319.2
Marion Bridge TVA Habitat Protection Area	111.2
Nickajack Cave TVA Habitat Protection Area/Small Wild Area	401.9
Nickajack Oak Wetland TVA Habitat Protection Area	47.9
Raccoon Mountain Pump Storage TVA Wildlife Observation Area	646.8
Shellmound Road Bluff TVA Habitat Protection Area*	99.3
Other Managed Areas on TVA Lands	
Aetna Slopes East Tenn. River Gorge Trust Tract	563.3
Aetna Slopes North Tenn. River Gorge Trust Tract	750.7
Bowater Property Conservation Easement	1398.9
Cummings Lake, Tenn. River Gorge Trust	277.2
Grant Tract Tenn. River Gorge Trust	912.6
Guntersville Reservoir State Mussel Sanctuary	2789
Little Cedar Mountain Tenn. River Gorge Trust Tract	806.9
Marion County Park	23.6
Nickajack Cave State Wildlife Observation Area	401.9
Pryor Property - Tennessee River Gorge Trust	266.5
Renfro Property Conservation Easement	103.4
Tennessee River Gorge	29407.8
Tennessee River Gorge Trust Easement	228.8

Table D-55. Natural Areas Managed by All Entities – Normandy Reservoir

Natural Area	Acres
TVA Natural Areas	
Short Springs TVA Small Wild Area	71.3
Other Managed Areas on TVA Lands	
Duck River State Mussel Sanctuary	6338.5
Jennings Farm - Conservation Easement Land Trust Of TN	277.3
Normandy Dam Wildlife Management Area	779.4
Normandy Reservoir Reservation	7890.1
Normandy Wildlife Management Area	779.4

Table D-56. Natural Areas Managed by Other Entities – Wheeler Reservoir

Natural Area	Acres
TVA Natural Areas	
Clark Bluff TVA Habitat Protection Area	20.4
Clarksville Mountain TVA Habitat Protection Area	37.5
Cotaco Creek TVA Small Wild Area	44.0
English Ivy TVA Small Wild Area	20.5
Long Oak Forest TVA Small Wild Area	100.8
Muddy Bottoms TVA Habitat Protection Area	287.5
Narrow Bluff TVA Habitat Protection Area	4.2
Pryor Branch TVA Habitat Protection Area	7.9
Other Managed Areas on TVA Lands	
Beaverdam Creek Swamp National Natural Landmark	588.2
Bluff City FCER Research Natural Area	11.0
Decatur Municipal Boat Harbor	10.5
Fluted Kidneyshell Designated Critical Habitat	28571.2
Guntersville Dam Tailwater Restricted Mussel Harvest Area	257.7
Hobbs Island Restricted Mussel Harvest Area	362.5
Joe Wheeler State Park	2441.4
Limestone County Park	102.3
Madison County Boat And Harbor Park	384.8
Mallard-Fox Creek Wildlife Management Area Alabama	3909.0
Marshall Space Flight Center (NASA)	1876.9
Point Mallard Park	409.0
Redstone Arsenal Military Reservation	38385.2
Slabside Pearlymussel Designated Critical Habitat	23519.0
Swan Creek State Wildlife Management Area	9515.9
Wheeler Dam Tailwater Restricted Mussel Harvest Area	2028.6
Wheeler National Wildlife Refuge	37553.9
Wheeler Reservoir Reservation	95205.6

Table D-57. Natural Areas Managed by Other Entities – Wilson Reservoir

Natural Area	Acres
TVA Natural Areas	
Old First Quarters TVA Small Wild Area	26.2
Other Managed Areas on TVA Lands	
Muscle Shoals National Recreation Trail	48.6
Muscle Shoals Reservation	2427.5
Veterans Park	95.7
Wilson Dam Tailwater Restricted Mussel Harvest Area	1365.5

Table D-58. Natural Areas within 3 Miles of Chickamauga Reservoir

Natural Areas
Amnicola Marsh State Wildlife Refuge
Big Soddy Creek Gulf
Calvert Property – Land Trust Of TN Conservation Easement
Chickamauga And Chattanooga National Military Park
Circle G Conservation Easement – Land Trust For TN
Circle V Farm Conservation Easement - Land Trust For TN
City Of Chattanooga – Blueway/Trail Easement
Cumberland Trail
Cumberland Trail State Park
Grassy Creek Cave
Grassy Creek Cave Protection Planning Site
Greenway Farm City Park Chattanooga
Gunstocker Glade
Houston Donation Conservation Easement – Land Trust For TN
Icses TVA Project (Carbon Offset Sites)
Kinzalow Property – Conservation Easement Land Trust Of TN
Kinzlow Property- Conservation Easement
Laurel Snow Class State Natural Area
North Chickamauga Creek Oak Forest
North Chickamauga Creek Wildlife Management Area
Poe Branch Wetland – TWRA
Standifer Gap Marsh Conservation Easement – Land Trust For TN
Volunteer Army Ammunition Plant
Watts Bar Reservoir Reservation
Watts Bar State Wildlife Management Area

Table D-59. Natural Areas within 3 Miles of Fort Loudoun Reservoir

Natural Areas – Fort Loudoun Reservoir
Alcoa Marsh- Registered State Natural Area
Browder Woods Registered State Natural Area
Cruze Farm Conservation Easement – Land Trust For Tennessee
Dean's Woods
Farragut Wetland Registered State Natural Area
Fluted Kidneyshell Designated Critical Habitat
Forks Of The River Wildlife Management Area
French Broad River
Hall Bend TVA Habitat Protection Area
Holston River
Ijams Nature Center
Little Tennessee River
Luxmore Drive Natural Area
Marble Springs Creek Stream Mitigation Site
Marble Springs State Historic Site & Arboretum
Meads Quarry – Ijams Nature Center
River Bluff Wildlife Area
Tellico Reservoir Reservation
Turkey Creek
Turkey Creek Wetland Park
University Of Tennessee Farm Woodlot
University Of Tennessee Gardens
Ut Organic Farms Unit

Table D-60. Natural Areas within 3 Miles of Great Falls Reservoir

Natural Areas – Great Falls Reservoir
Big Bone Cave Designated State Natural Area
Bridgestone - Firestone Centennial Wilderness Wildlife Management Area
Calfkiller River
Cane Creek
Caney Fork
Centennial Wilderness
Center Hill Reservoir Reservation
Charles Creek
Collins River
Fall Creek Falls State Park
Hickory Valley Wetlands
Mountain Creek
Mud Creek Swamp
Rocky River
Scotts Gulf
White County Lumber Company Conservation Easement - Land Trust For TN

Table D-61. Natural Areas within 3 Miles of Kentucky Reservoir

Natural Areas – Kentucky Reservoir
Ashworth Property – Land Trust Of TN Conservation Easement
Barkley Lake Wildlife Management Area
Barkley Reservoir Reservation
Baugus Cave Protection Planning Site
Beason Creek Wetland – TWRA
Beech River Wildlife Management Area
Blockhouse Hollow Biosphere Reserve Core Area
Blood River Seeps KY State Nature Preserve
Carroll Cabin Barrens Designated State Natural Area
Chambers Creek Wetland – TWRA
Crab Creek Biosphere Reserve Core Area
Crooked Creek Stream Mitigation Site
Cumberland River
Devil's Backbone Registered State Natural Area
Dividing Ridge Saf/Fcer Research Natural Area
Eagle Creek State Wildlife Management Area
Environmental Education Biosphere Reserve Core Area
Grasslands Reserve Program
Gumdale Silurian Glade Site
Higgins Bay Biosphere Reserve Core Area
Hurricane Creek Farms – Conservation Easement Land Trust Of TN
Johnsonville Coal Generating Facility
Kentucky Reservoir No. 2 State Mussel Sanctuary
Land Between The Lakes Area Biosphere Reserve
Land Between The Lakes Environmental Education Area
Land Between The Lakes Potential National Natural Landmark
Land Between The Lakes/KY State Wildlife Management Area
Nine Acre Glade Protection Planning Site
Nine-Acre Glade Complex
Pickwick Landing State Park
Pilot Knob Potential National Natural Landmark
Pond Hollow Biosphere Reserve Core Area
Saltillo Boat Ramp To Tennessee River – TWRA
Savannah Bridge Boat Access – TWRA
Shiloh National Battlefield
Walker Branch Hills Designated State Natural Area

Table D-62. Natural Areas within 3 Miles of Nickajack Reservoir

Natural Areas – Nickajack Reservoir
Alexander Property
Amnicola Marsh State Wildlife Refuge
Baxtor Property
Big Forks Tree Farm Conservation Easement – State Of TN
Big Ridge Registered State Natural Area
Big Ridge TVA Small Wild Area
Bill Mcnabb Gulf (In Prentice Cooper St. Forest)
Blowing Springs Branch/Chestnut Bridge Hollow Woods Protection Planning Site
Bluff Point/Hicks Mountain
Booker T Washington State Park
Boyd Farm – TVA Property
Burns Island – TVA
Cash Property – TN River Gorge Conservation Easement
Chattanooga Arboretum And Nature Center At Reflection Riding
Chickamauga And Chattanooga National Military Park
City Of Chattanooga – Blueway/Trail Easement
Cummings Lake
Cummins Cove Wildlife Management Area
Dry Creek Ravine
Edwards Point
Edwards Point Sandstone Outcrops
Ellis Spring-Shakerag
Fairview Slopes TVA Habitat Protection Area
Greenway Farm City Park Chattanooga
Hicks Gap Designated State Natural Area
Kelly's Ferry Slopes Tenn. River Gorge Trust
Little Sequatchie River
Lovell Field Wildlife Management Area
Maclellan Island Audubon Society Wildlife Refuge
Mullens Cove Slopes
Nickajack Reservoir State Mussel Sanctuary
North Chickamauga Creek Greenway
North Chickamauga Creek Oak Forest
North Chickamauga Creek Wildlife Management Area
Pan Gap Slopes
Parker Gap Cove
Piney Branch Bottomland
Pot Point Tenn. River Gorge Trust Tract
Prentice Cooper State Forest & Wildlife Management Area

Natural Areas – Nickajack Reservoir
Rutledge Property
Rymer Property
Sequatchie River
Short Leaf Pine Flat
Shortleaf Pine Flat Protection Planning Site
Signal Point State Wildlife Observation Area
Slabside Pearlymussel Designated Critical Habitat
Smith Property Conservation Easement–Tennessee River Gorge
Standifer Gap Marsh Conservation Easement - Land Trust For TN
Sulphur Branch Protection Planning Site
Tennessee Wildlife Center
Three B TVA Habitat Protection Area
TVA Mcnab Slopes (Mou With Tenn. River Gorge Trust)
University Of Tennessee Chattanooga Campus/Arboretum
Volunteer Army Ammunition Plant
Williams Island State Archaeological Area

Table D-63. Natural Areas within 3 Miles of Normandy Reservoir

Natural Areas – Normandy Reservoir
AEDC And Woods State Wildlife Management Area
AEDC Highway 55 Oak Barren
AEDC Military Reservation
AEDC West Fork Huckleberry Creek Barrens
Arnold Engineering Development Center (AEDC)
Bedford State Fishing Lake
Old Stone Fort State Park/Ppnl/State Archaeological Area
Rutledge Falls

Table D-64. Natural Areas within 3 Miles of Wheeler Reservoir

Natural Areas – Wheeler Reservoir
Bell Mountain Bell Road Property North Al Land Trust
Bell Mountain Hobbs Road North Al Land Trust Property Floodway
Blowing Springs Cave Tract – Forever Wild Alabama
Cave Mountain TVA Small Wild Area
Echota Cherokee
Elk River
Green Mountain–- North Alabama Land Trust
Hambrick Hollow TVA Habitat Protection Area
Honey Bluff TVA Habitat Protection Area
Honeycomb Creek TVA Small Wild Area
Mathis Mountain Conservation Easement - North Alabama Land Trust
North Alabama Land Trust – 32 Percent Reserved Land
North Alabama Land Trust – Clark Property
North Alabama Land Trust – Conservation Easement
North Alabama Land Trust – Grand Lake Property
North Alabama Land Trust – Monte Vedra Road Property
North Alabama Land Trust – Tract 1
Paint Rock River Project
Rabbitsfoot Designated Critical Habitat
Southeastern Cave Conservancy – Glove Pit Cave Preserve

Table D-65. Natural Areas within 3 Miles of Wilson Reservoir

Natural Areas – Wilson Reservoir
Billingsley-Mcclure Shoal Creek Preserve –Forever Wild Alabama
Joe Wheeler State Park
Shoal Creek Nonessential Experimental Population
Wheeler Dam Tailwater Restricted Mussel Harvest Area
Wheeler Reservoir Reservation

This page intentionally left blank

TENNESSEE VALLEY AUTHORITY

Multiple Reservoir Land Management Plans

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Volume II
Chickamauga Reservoir

December 2016

TVA

This page left blank intentionally

Document Type: EIS Administrative Record
Index Field: Draft EIS
Project Name: Multiple RLMPs & CVLP EIS
Project Number: 2016-2

CHICKAMAUGA RESERVOIR

Draft Reservoir Land Management Plan

VOLUME II

MULTIPLE RESERVOIR LAND MANAGEMENT PLANS
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Prepared by
Tennessee Valley Authority

December 2016

This page intentionally left blank

Table of Contents

ACRONYMS AND ABBREVIATIONS ..... **II-V**
CHAPTER 1. INTRODUCTION **II-1**
1.1 Tennessee Valley Authority History II-1
1.2 Overview of TVA's Vision and Environmental Policy II-2
1.2.1 TVA's Mission II-2
1.2.2 Environmental Policy II-2
1.2.3 Land Policy II-2
1.2.4 Shoreline Management Policy II-3
1.3 The Natural Resource Plan II-5
1.4 Purpose of Reservoir Land Planning II-5
CHAPTER 2. REGIONAL OVERVIEW **II-7**
2.1 History of Chickamauga Dam II-7
2.2 Chickamauga Reservoir and Present Shoreline II-8
2.2.1 Land Use and Prime Farmland II-9
2.2.2 Recreation II-11
2.2.3 Terrestrial Ecology II-15
2.2.4 Aquatic Ecology II-21
2.2.5 Threatened and Endangered Species II-24
2.2.6 Water Quality II-38
2.2.7 Wetlands II-40
2.2.8 Floodplains II-42
2.2.9 Air Quality II-43
2.2.10 Cultural and Historic Resources II-43
2.2.11 Natural Areas and Ecologically Significant Sites II-47
2.2.12 Aesthetics and Visual Resources II-47
2.2.13 Noise II-48
2.2.14 Socioeconomics II-50
2.3 Major Features of Chickamauga Reservoir II-52
2.3.1 Historical Overview of the Chickamauga Region II-52
2.3.2 Natural Resource Management II-54
2.3.3 Natural Areas II-55
2.4 The Future Management of Reservoir Lands II-55
CHAPTER 3. LAND PLANNING PROCESS **II-57**
3.1 Process for Planning Land II-57
3.2 Chickamauga Reservoir Goals and Objectives II-62

3.3 Parcel Allocations II-63
3.4 Property Administration II-69
CHAPTER 4. PARCEL DESCRIPTIONS II-71
CHAPTER 5. PLANNING TEAM II-331
CHAPTER 6. LITERATURE CITED II-333
GLOSSARY II-337
INDEX II-339

Appendices

Appendix A – Draft Land Management Plan Maps – Panels 1 through 12 ..... II-343
Appendix B – Comparison of Parcel Allocations by Alternative II-347

List of Tables

Table 2-1. Prime Farmland on Chickamauga Reservoir II-11
Table 2-2. Developed Public Recreation Areas on TVA Lands on Chickamauga Reservoir II-13
Table 2-3. Developed Commercial, Private and Semi-Private (camps) Recreation Areas on TVA Lands on the Chickamauga Reservoir II-14
Table 2-4. Land Cover on TVA Owned Parcels and within the Vicinity of Chickamauga Reservoir II-16
Table 2-5. Invasive Non-native Plant Species that Pose a Severe Threat Known to Occur in Tennessee II-20
Table 2-6. RFAI and Benthic Community Scores for Chickamauga Reservoir (2011-2015) II-21
Table 2-7. Fish Species in Chickamauga Reservoir II-22
Table 2-8. Federally and State-listed Species in the Chickamauga Reservoir Counties II-25
Table 2-9. Habitat Requirements for Plant Species of Conservation Concern within 5 Miles of Chickamauga Reservoir II-30
Table 2-10. Habitat Requirements for Wildlife Species of Conservation Concern within 3 Miles of Chickamauga Reservoir II-32
Table 2-11. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Chickamauga Reservoir II-36
Table 2-12. Ecological Health Indicators at Chickamauga Reservoir – 2011 ..... II-39
Table 2-13. Direct Reservoir Average Daily Water Supply Withdrawals and Wastewater Discharges – 2016 ..... II-40
Table 2-14. Wetland Types within the Chickamauga Reservoir II-42
Table 2-15. Population and Percent Growth – Chickamauga Reservoir II-50
Table 2-16. Employment and Income, 2010-2014 – Chickamauga Reservoir II-51
Table 2-17. Minority Population and Poverty, 2010 -2014 – Chickamauga Reservoir II-52
Table 3-1. Land Use Zone Definitions II-57

Table 3-2. Summary of Proposed Land Use Allocations for Chickamauga Reservoir Land Management Plan (Alternative B) II-63

Table 3-3. Draft Chickamauga Reservoir Land Management Plan (Alternative B) and 2011 Comprehensive Valleywide Land Plan Comparison II-67

List of Figures

Figure 1-1. TVA Managed Reservoir Land II-4

Figure 3-1. Percent of Chickamauga Reservoir Acreage Proposed by Zone II-64

This page intentionally left blank

ACRONYMS AND ABBREVIATIONS

CVLP	Comprehensive Valleywide Land Plan
dBA	A-Weighted Decibels
EIS	Environmental Impact Statement
dBA	Decibel
HPA	Habitat Protection Area
msl	Mean Sea level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NPS	National Park Service
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRI	Nationwide Rivers Inventory
NRP	Natural Resource Plan
NWI	National Wetland Inventory
NWSG	Native Warm Season Grasses
PSD	Prevention of Significant Deterioration
RFAI	Reservoir Fish Assemblage Index
RLMP	Reservoir Land Management Plan
RVSMP	Reservoir Vital signs Monitoring Program
SHPO	State Historic Preservation Officer
SMI	Shoreline Management Initiative
SMP	Shoreline Management Policy
SR	Tennessee State Route
SWA	Small Wild Area
TRM	Tennessee River Mile
TVA	Tennessee Valley Authority
TWRA	Tennessee Wildlife Resources Agency
USDA	U.S. Department of Agriculture
USDOI	U.S. Department of the Interior
USFS	U.S. Forest Service
Valley	Tennessee Valley Region
WMA	Wildlife Management Area
WOA	Wildlife Observation Area

This page intentionally left blank

CHAPTER 1. INTRODUCTION

The draft Chickamauga Reservoir Land Management Plan (RLMP) is a study of the Tennessee Valley Authority (TVA)-managed public land surrounding Chickamauga Reservoir. It is one of eight draft RLMPs considered under Alternative B of an Environmental Impact Statement (EIS). The EIS Volume I, contains information on the scoping process, allocation process, alternatives, comparison of the alternatives, and analysis of impacts. In addition, the EIS contains a summary, an index, and appendices.

Volume II of the EIS addresses TVA's draft RLMP for Chickamauga Reservoir. This Volume provides background information about TVA land management throughout its history and specifically TVA management of public land surrounding Chickamauga Reservoir. It explains the purpose of the draft RLMP and describes the process used in its development. The draft RLMP includes the planning process, which lists the objectives around which the RLMP was developed and a summary of the allocation process. The Chickamauga Reservoir Regional Overview (Chapter 2) describes the natural and social development of the reservoir and the surrounding area. The Parcel Descriptions (Chapter 4) include total acreage and parcel descriptions documenting proposed land management allocations. The allocation map is included as Appendix A of this draft RLMP.

Once TVA completes its Multiple RLMP EIS, this Volume will serve as the consolidated planning document addressing management of TVA reservoir lands on Chickamauga Reservoir and will be available to TVA staff and the public.

1.1 Tennessee Valley Authority History

President Franklin Roosevelt needed creative solutions to lift the nation out of the depths of the Great Depression, and TVA is considered one of his most innovative initiatives. Roosevelt envisioned TVA as an agency different from any other. He asked Congress to create "a corporation clothed with the power of government but possessed of the flexibility and initiative of a private enterprise." On May 18, 1933, Congress passed the Tennessee Valley Authority Act (TVA Act). A link to the TVA Act is available at https://www.tva.com/About-TVA/Our-History.

From the start, TVA established a unique problem-solving approach to fulfilling its mission: Integrated Resource Management. Each issue TVA faced—whether it was power production, navigation, flood control, malaria prevention, reforestation, or erosion control—was studied in its broadest context. TVA weighed each issue relative to the others. From this beginning, TVA has

held fast to its strategy of integrated solutions, even as the issues changed over the years. A short TVA history is available at http://www.tva.com/abouttva/history.htm.

1.2 Overview of TVA's Mission and Environmental Policy

1.2.1 TVA's Mission

TVA has a rich history of improving quality of life and economic prosperity for people and businesses in the TVA service area. TVA was created by Congress in 1933 and charged with a unique mission—to improve the quality of life in the Valley through the integrated management of the region's resources. For more than eight decades, we have worked tirelessly to carry out that mission, and we are working just as hard to make life better for the nine million people who live in the Valley today. We serve the people of the Tennessee Valley by focusing on three key areas: energy, environment, and economic development.

1.2.2 Environmental Policy

As stated in TVA's 2007 Strategic Plan, "TVA will be proactive in addressing environmental concerns, including those related to global climate change." About half of the identified strategic objectives and critical success factors in the plan relate directly to TVA's environmental activities and policy-making.

Following the release of the 2007 Strategic Plan, the TVA Board asked for the development of an integrated environmental policy to outline objectives and critical success factors across the multiple areas of TVA's activities. In 2008, the TVA Board approved the Environmental Policy, which provides guiding principles for reducing the environmental impacts of TVA operations while continuing to provide reliable and affordable power to the Valley. In 2010, a biennial review of the Environmental Policy was completed, which did not result in major changes or revisions. TVA's overarching Environmental Policy objective is to provide cleaner, reliable, and affordable energy; support sustainable economic growth in the Valley; and engage in proactive environmental stewardship in a balanced and ecologically sound manner. A copy of the Environmental Policy is available at http://www.tva.com/environment/policy.htm.

1.2.3 Land Policy

On behalf of the United States, TVA originally acquired approximately 1.3 million acres of land in the Valley. Creation of the TVA reservoir system inundated approximately 470,000 acres with water. TVA has transferred or sold approximately 508,000 acres, the majority of which was transferred to other federal and state agencies for public uses. TVA currently controls approximately 293,000 acres of reservoir lands, which continue to be managed pursuant to the

TVA Act (Figure 1-1). As part of its management of these lands, TVA allocates them to various land use zones (see Section 3.1). These TVA-managed lands are frequently referred to as "TVA lands" in this document.

In 2006, TVA adopted a Land Policy to guide retention, disposal, and planning of real property. Accordingly, it is TVA's policy to manage its lands to protect the integrated operation of the TVA reservoir and power systems, to provide for appropriate public use and enjoyment of the reservoir system, and to provide for continuing economic growth in the Valley. Recognizing that historical land transfers have contributed substantially to meeting multipurpose objectives, TVA maintains the policy of retaining in public ownership the reservoir lands under its control except in those rare instances where the benefits to the public will be so significant that transferring lands to private ownership or another public entity is justified. The Land Policy is available at https://www.tva.gov/Environment/Environmental-Stewardship/Land-Management/TVA-Land-Policy

1.2.4 Shoreline Management Policy

In November 1998, TVA completed a Shoreline Management Initiative (SMI) EIS (TVA 1999) analyzing possible alternatives for managing residential shoreline development throughout the Valley. In April 1999, TVA adopted the agency's current Shoreline Management Policy (SMP), which incorporates a strategy of managing public shoreline through an integrated approach that conserves, protects, and enhances shoreline resources and public use opportunities while providing for reasonable and compatible use of the shoreline by adjacent residents. The SMP defines the standards for vegetation management, docks, shoreline stabilization, and other residential shoreline alterations. The SMI EIS is available at https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy

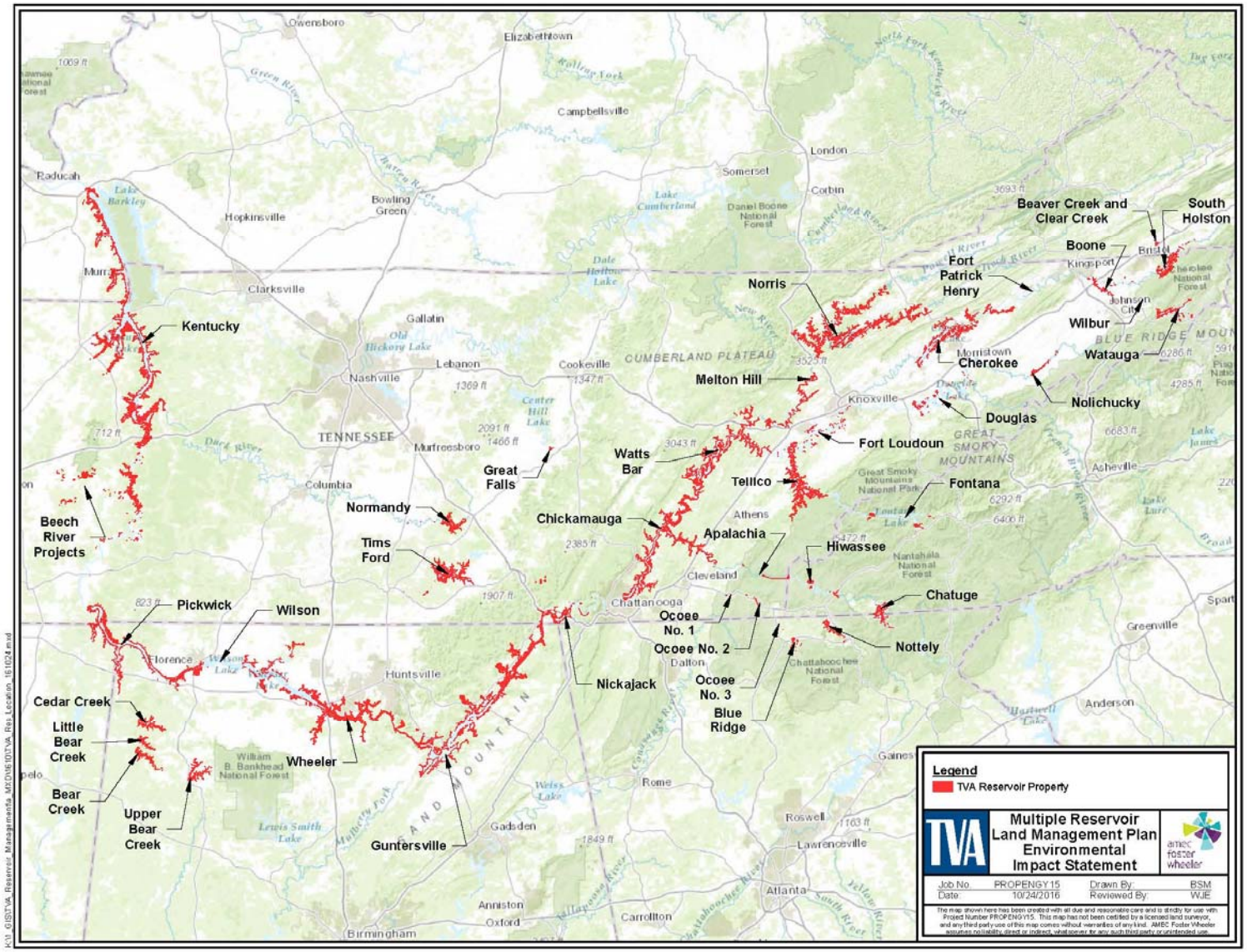


Figure 1-1. TVA Managed Reservoir Land

1.3 The Natural Resource Plan

In 2011, TVA completed a Natural Resource Plan (NRP) (TVA 2011) that strategically guides the management of both renewable and nonrenewable resources, underscoring the importance of protecting those resources that will be lost forever if they are not actively protected or improved today. TVA is one piece of the solution and recognizes the need for a coordinated and collaborative effort to meet the near- and long-term resource needs. As such, the NRP is designed to:

- Integrate the objectives of six resource areas (biological, cultural, recreation, water, public engagement and reservoir lands planning).
- Provide optimum public use benefit.
- Balance competing and sometimes conflicting resource uses.

These competing interests, coupled with today's environmental awareness and focus on preserving nonrenewable resources, underscore the necessity for a consistent approach to the management of TVA lands. The NRP represents TVA's high-level strategy for managing its natural resources in the near and long term. Detailed implementation plans, such as this draft RLMP, are being developed based on the NRP to drive specific implementation efforts. The NRP is available at https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan.

1.4 Purpose of Reservoir Land Planning

As a regional development agency and the nation's largest public power provider, TVA is committed to protecting and sustaining the environmental resources of the Valley for future generations through leadership in clean energy innovation and environmental management. In managing its public lands and resources, TVA seeks to provide efficient resource stewardship that is responsive to stakeholder interests.

TVA intends to manage its public land for an optimum level of multiple uses and benefits that protect and enhance natural, cultural, recreational, and visual resources in a cost-effective manner. Through this approach, TVA ensures that resource stewardship issues and stakeholder interests are considered while optimizing benefits and minimizing conflicts.

As part of the NRP, TVA developed a Comprehensive Valleywide Land Plan (CVLP). The CVLP guides resource management and administration decisions on the approximately 293,000 acres of TVA lands around 46 reservoirs. It identifies the most suitable uses for the land under TVA's control, identifying areas for project operations, sensitive resource management, natural resource conservation, industrial/commercial development, developed recreation, and shoreline access. The objectives of the CVLP are designed to implement TVA's mission of serving the Valley through energy, environment, and economic development. Under the CVLP, TVA will develop and update RLMPs, such as this proposed plan, for a portion of a reservoir, an entire reservoir, or a group of reservoirs. RLMPs are consistent with TVA's policies and programs discussed within this chapter.

The CVLP will be recalibrated as needed (as described under Alternative B in Volume I of this EIS, TVA proposes to update the target ranges of the CVLP to incorporate the findings of the eight draft RLMPs). The CVLP was based, in part, on the anticipation that some parcels of land may be better allocated to different land use zones from those initially identified. For example, field assessments may identify additional areas that warrant the sensitive resource management allocation. In addition, during the creation or update of each individual RLMP, TVA may determine, either for its own management purposes or as a result of public input, that certain parcels of land should be used differently from how they have been used in the past. The preliminary results of the Chickamauga Reservoir planning effort have been included in determining the proposed revisions to the CVLP. The draft Chickamauga RLMP and proposed revisions to the CVLP will be included in the five-year cyclic review of the NRP.

CHAPTER 2. REGIONAL OVERVIEW

The headwaters of the Tennessee River are in eastern Tennessee, southwestern Virginia, western North Carolina, and northern Georgia. The Tennessee River is formed by the confluence of the Holston and French Broad rivers just above Knoxville, Tennessee. The river flows in a southwesterly direction through Tennessee, crosses northern Alabama, forms a small portion of the northeastern boundary of Mississippi, and then flows north through western Tennessee and western Kentucky to empty into the Ohio River at Paducah, Kentucky, a distance of about 650 miles. The Tennessee River drains an area of 40,910 square miles, about equal to the area of Ohio. The headwaters are in the Great Smoky Mountains and the Blue Ridge Mountains, which are the highest ranges east of the Rockies. The mountain region is in striking contrast to the relatively flat lands of northern Alabama and to the rolling land of western Kentucky.

The TVA Act was amended August 31, 1935, requiring TVA to report to Congress its recommendations for the unified development of the Tennessee River System. The proposed system would include nine main river, multi-purpose dams, and three or more tributary storage dams. The system would contribute substantially to the control of floods on the Tennessee, lower Ohio, and lower Mississippi rivers, establish a formalized navigation channel, and provide many related benefits, including a large supply of electric power (TVA 1989).

2.1 History of Chickamauga Dam

Chickamauga Dam was the fourth of the main-river projects to be constructed by TVA. At the time it was authorized, Pickwick, Wheeler, and Guntersville projects were under construction or authorized to begin construction. These three projects, in conjunction with the older Wilson and Hales Bar projects and dredging below each project, would create the prescribed 9-foot navigable depth from Pickwick to Chattanooga, a river distance of about 260 miles. This left for canalization of the stretch between Pickwick and the mouth of the Tennessee River and the stretch between Chattanooga and Knoxville. A consideration of the proper sequence of developing the stretches favored the construction of the Chickamauga project first, as a reasonable degree of navigation below Pickwick was possible at most times, while above Chattanooga it was practically impossible at all periods. The Kentucky project would provide the 9-foot channel to the Pickwick project (TVA 1942).

On January, 13, 1936, TVA began construction on Chickamauga Dam, 7 miles above Chattanooga. As the U.S. emerged from the Depression, the Chickamauga Dam project provided 14 million man-hours of badly needed employment for many of the people in the reservoir area. The five-year project (1936-1941) involved more than actual activity at the construction site for the dam. Acquisition of land, surveying, mapping, clearing of the reservoir area, rebuilding bridges, relocating roads and power lines, reforestation of over 5,000 acres of eroded land, and the purchase of major materials and equipment were among those project objectives which totaled over $40 million and added to the area's economy (TVA 1989).

Chickamauga Dam consists of a navigation lock, concrete gravity spillway section, and powerhouse, flanked on both north and south banks by rolled-fill earth embankments. The south earth embankment, turning slightly upstream, extends to a distance of 2,999 feet along the axis to the high bluff. A similar earth fill, 1,385 feet in length, turns sharply upstream and extends from the navigation lock to the north abutment. The upstream and downstream slopes are paved with broken stones laid on a 12-inch gravel blanket. The concrete spillway section extending from the river wall of the lock to the powerhouse intake, a distance of 864 feet, is made up of 18 bays. The original spillway gates were a fixed roller design and operated by cranes.

The North Chickamauga Creek was diverted from its former channel to a new channel emptying into the river just below the downstream end of the navigation lock. The new channel, 2,250 feet long and 40 feet wide at the bottom, required excavation of 571,120 cubic yards of earth and rock.

Relocation of 81 miles of highways and 39 bridges also occurred. The protection of certain existing highways and railroads was also necessary. The access roads to Chickamauga Dam were designed and constructed by TVA. In all cases where new roads replaced those to be inundated by the reservoir, the new construction was at least equal to that which previously existed. In certain cases, upgrades to the existing construction were desired by the state and counties, and those agencies agreed to pay the added cost. The reservoir impacted the railroad lines to a slight extent, with only bank protection being required (TVA 1942).

2.2 Chickamauga Reservoir and Present Shoreline

Construction of Chickamauga Dam was completed in 1940. Located at river mile 471.0, Chickamauga Dam is 129 feet high and stretches 5,800 feet across the Tennessee River in Hamilton County, Tennessee. The dam is 7 miles above Chattanooga and maintains a

navigation channel approximately 59 miles up the Tennessee River to Watts Bar Dam and along the Hiwassee River to Charleston, Tennessee.

The reservoir has a total volume of 737,700 acre-feet and a flood-storage capacity of 345,300 acre-feet. To maintain the water depth required for navigation, the minimum winter elevation for the reservoir is 675-feet mean sea level (msl), and the typical summer operating range is between 681.5 and 682.5 feet msl. Chickamauga Dam has one lock, 60 feet wide by 360 feet long. The lock lifts and lowers barges as much as 50 feet between the Chickamauga and Nickajack reservoirs.

The drainage area at Chickamauga Dam is approximately 20,790 square miles. The reservoir property is situated in Bradley, Hamilton, McMinn, Meigs, Polk, and Rhea counties in Tennessee. The Chickamauga Reservoir has 784 miles of shoreline and a total surface area of approximately 36,240 acres. To create this reservoir, it was necessary to acquire approximately 61,350 acres of land and landrights for flooding, erosion control, and other purposes; clear over 6,030 acres; relocate 81 miles of highways and 27.3 miles of utility and phone lines, reconstruct 39 bridges; and protect railroads (TVA 1942).

A total of 61,351 acres of land were acquired for the construction of Chickamauga Dam. Of this property, 95 percent was purchased by voluntary transfer; 2.5 percent was condemned because of defective title and constituted non-contest cases; and 2.5 percent had to be condemned because of refusal to sell at the appraised value. Although some flowage easements were acquired, it was the general policy of TVA to acquire the unencumbered fee of the property throughout the reservoir area. An exception was made where there were outstanding mineral rights on properties lying above the flood level of the reservoir. No attempt was made to acquire such mineral interest, which resulted in economy in the land acquisition program and avoided restriction of any mineral development in the area.

2.2.1 Land Use and Prime Farmland

TVA originally acquired approximately 59,600.7 acres of land in fee; approximately 1,490.2 acres of flowage easements; and approximately 244.3 acres of highway easements for Chickamauga Reservoir. TVA sold or transferred approximately 17,545.2 acres of land from the original acquisition. The remaining approximate 15,915 acres along with approximately 130 acres of flood prone areas supporting dewatering areas (totaling approximately 16,041.4 acres) are the scope of this RLMP. These lands are currently managed in accordance with TVA's Chickamauga RLMP completed in 1989. The area surrounding the reservoir is

primarily rural. The shoreline of Chickamauga Reservoir is composed of a variety of land uses including forested areas, residential development, recreation areas, suburban areas, parks, farmed areas, and a relatively small amount of industrial and commercial uses primarily located in the vicinity of the dam. These land uses are generally reflected in the land cover database for the parcels around the reservoir and the surrounding area which identifies land cover in these areas as primarily forested and pasture land. Other common land cover types include developed open space which includes single family housing units on large lots, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes.

According to TVA's 1998 SMI EIS, TVA owns approximately 776.5 miles of the 784 total miles of shoreline (99 percent) on Chickamauga Reservoir (see Volume I, Table 3-1). Less than 1 percent (approximately 7 miles) of the shoreline miles on this reservoir is privately owned and is available for residential shoreline development (see Volume I, Table 3-2). In the SMI EIS, TVA estimates that approximately 44 percent of this privately-owned shoreline is currently developed with residential subdivisions. TVA has holds flowage easement rights along portions of this private shoreline.

As identified in above, TVA originally purchased approximately 59,600.7 acres of land in fee; approximately 1,490.2 acres of flowage easements for Chickamauga Reservoir, some of this land had been sold or is inundated. However, any structures placed within existing flowage easements are subject to Section 26a of the TVA Act. Section 26a of the TVA Act requires that TVA's approval be obtained prior to the construction, operation, or maintenance of any dam, appurtenant works, or other obstruction affecting navigation, flood control, or public lands or reservations across, along or in the Tennessee River or any of its tributaries. For more information on TVA's SMP, see Section 3.4 of this RLMP.

TVA public land on the Chickamauga Reservoir contains 6,496.4 acres of identified prime farmland (Table 2-1). Prime farmland has soil with the best combination of soil physical and chemical characteristics for producing food and fiber and is protected from conversion to industrial and nonagricultural uses by the United States Department of Agriculture (USDA). It is noted, however, that current soil mapping of prime farmland soils does not account for existing developed uses that may have previously disturbed and potentially converted prime farmland. No land of statewide importance designation occurs around the Chickamauga Reservoir.

Table 2-1. Prime Farmland on Chickamauga Reservoir

Zone	Prime Farmland (acres)
Zone 2 - Project Operations	301.2
Zone 3 - Sensitive Resource Management	1,069.6
Zone 4 - Natural Resource Conservation	3,974.4
Zone 5 - Industrial	47.4
Zone 6 - Developed Recreation	515.4
Zone 7 - Shoreline Access	588.3
Total	**6,496.4**

Source: USDA NRCS 2016a

The majority (5,044 acres) of prime farmland occurs in the proposed Zones 3 and 4 lands, which by their function, would have little or no soil disturbance. Only 515.4 acres occur in lands proposed as Zone 6, where major soil disturbances could occur in specific locations if recreation facilities are constructed. Conversely, large areas could remain unaffected for more dispersed recreation management. Major soil disturbance could occur when TVA or other public facilities are constructed in lands proposed for Zone 2, which includes 301.2 acres of prime farmland. However, most parcels proposed for Zone 2 already contain facilities that are not likely to require substantial modification. The least amount of prime farmland (47.4 acres) would occur in Zone 5. For information on prime farmland and potential impacts of the draft RLMP, see Volume I, Section 3.3.

2.2.2 Recreation

TVA provides public lands for developed and dispersed recreational purposes through the reservoir lands planning process. Developed recreation includes campgrounds, lodges, marinas, boat-launching ramps, parks, swimming pools and beaches and golf courses. Dispersed recreation activities include picnicking, primitive camping, hiking, bank fishing, hunting, kayaking and canoeing. In 2005, TVA developed a recreation strategic plan aimed at collaboratively enhancing recreational opportunities and addressing unmet recreational needs while managing the resources of the Tennessee River system (TVA 2005). This strategy laid out guiding principles for how to best design and develop recreation opportunities. During this reservoir lands planning effort, tracts of TVA-managed lands around Chickamauga Reservoir were categorized based upon a suitable use that is consistent with TVA policy and guidelines and applicable laws and regulations.

At the Chickamauga Reservoir, developed recreation provides modern facilities and amenities such as campgrounds, developed boat launches/ramps, parks and a myriad of day use facilities

(picnic areas, swimming beaches, and fishing piers). These uses primarily occur on TVA lands allocated to Zone 6 (Developed Recreation) and Zone 2 (Project Operations). Under the draft RLMP (Alternative B), approximately 12 percent (1,873.4 acres) of TVA land on Chickamauga Reservoir would be allocated to Zone 6 and approximately 8 percent (1,220.3 acres) would allocated to Zone 2 (see Figure 3-1).

Chickamauga Reservoir is an outdoor recreation resource that attracts visitors from within and outside the region. A total of 64 recreation areas have been developed on the Chickamauga Reservoir including public parks and access areas, commercial recreation operations and group camps and semi-private clubs. Many of these recreation areas are located on properties that TVA transferred, leased or licensed for recreation development and use. Several public parks developed on lands made available by TVA include Harrison Bay and Booker T. Washington state parks and Chester Frost Park. Recreation facilities at the Harrison Bay State Park include a campground, trails, picnic areas, a swimming pool, a marina, boat-launching ramps and a golf course (Tennessee State Parks 2016). The 353-acre Booker T. Washington State Park has a lodge, campground, mountain bike trail, hiking trails, picnic areas, fishing pier and a boat-launching ramp (Tennessee State Park 2016). Other public agencies have also developed boat-launching ramps and community parks (Chester Frost Park) on TVA lands at strategic locations around the reservoir. Semi-private clubs include Privateer Yacht Club and group camps, such as the Camp Dixie Group Camp. Commercial recreation operations include the Harbor Lights Marina, Shady Grove Harbor Marina and Pine Harbor Marina.

Table 2-2 itemizes developed recreation area lands that are managed by TVA or another public agency for recreation purposes. Table 2-3 summarizes commercial, private, and semi-private developed recreation areas. Tables 2-2 and 2-3 do not itemize recreation areas on non-TVA shorelands (Zone 1) because these areas are beyond the scope of this draft RLMP. Chickamauga Reservoir parcel descriptions (see Chapter 4) further describe the management entity and management descriptions of recreation facilities on lands managed by either TVA or under contractual agreement.

Some of the TVA lands on Chickamauga Reservoir provide excellent opportunities for dispersed or nature-based recreation activity. Dispersed recreation could occur on lands proposed to be allocated to Zone 2 (Project Operations) and undeveloped areas proposed to be allocated Zone 6 (Developed Recreation) as well as on lands proposed as Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation). For example, on lands that TVA

proposes to allocate to Zone 4 (Natural Resource Conservation) dispersed recreation activities include hunting, wildlife observation, fishing and camping on undeveloped sites.

Table 2-2. Developed Public Recreation Areas on TVA Lands on Chickamauga Reservoir

Recreation Area	Managing Entity	Parcel Location
Chickamauga Dam Reservation	TVA	1
Chester Frost Park	Hamilton County	23
Park	City of Soddy Daisy	54
Roadside Park	City of Soddy Daisy/state of Tennessee	58
Boat Ramp	State of Tennessee	64
Boat Ramp	State of Tennessee	91
Boat Ramp	Rhea County/State of Tennessee	105
Boat Ramp	State of Tennessee	112
Dayton City Park	City of Dayton	121
Boat Ramps	State of Tennessee	130
Boat Ramp	TVA	135
Old Washington Park	Rhea County	161
Boat Ramp	State of Tennessee	178
Boat Ramp	City of Decatur/Meigs County	185
Boat Ramp	State of Tennessee	192
Boat Ramp	State of Tennessee	195
Boat Ramp	State of Tennessee	229
Boat Ramp	City of Calhoun	253
Charleston Greenway	City of Charleston	262
Boat Ramp	State of Tennessee	281
Boat Ramp	Meigs County	289
Cherokee Memorial Park	Meigs County	295
Boat Ramp	State of Tennessee	299
Boat Ramp	State of Tennessee	313
Boat Ramp	State of Tennessee	321
Harrison Bay State Park	State of Tennessee	340
Boat Ramp	State of Tennessee	343
Boat Ramp	State of Tennessee	361
Boat Ramp	State of Tennessee	371
Boat Ramp	State of Tennessee	374
Booker T. Washington State Park	State of Tennessee	378

Table 2-3. Developed Commercial, Private and Semi-Private (camps) Recreation Areas on TVA Lands on the Chickamauga Reservoir

Recreation Area	Managing Entity	Parcel Location
Lakeshore Marina/Gold Point Marina	Commercial	3
Privateer Yacht Club	Private	6
Big Ridge Marina	Commercial	11
Camp Columbus	Private	25
Camp Dixie Group Camp	Private	32
Harbor Lights Yacht Club	Private	35
Shady Grove Harbor Marina	Commercial	44
Pine Harbor Marina	Commercial	50
Possum Creek Recreation Area	Commercial	71
Sale Creek Marina	Commercial	86
Sale Creek Recreation Area	Commercial	98
Blue Water Campground and Boat Dock	Commercial	124
Cotton Port Fish N Camp	Commercial	202
Armstrong Ferry Recreation	Commercial	210
Agency Creek Campground and Dock	Commercial	219
Campground	Private	223
B&B Marina	Commercial	273
Grasshopper Creek Recreation Area	Commercial	306
Skull Island Campground	Commercial	326
Island Cove Marina	Commercial	358
Chattanooga Yacht Club	Private	366
Provident Club	Private	369
Chickamauga Marina	Commercial	382

For more information on recreation resources and the potential impacts of the draft RLMP, see Volume I, Section 3.4.

2.2.3 Terrestrial Ecology

Chickamauga Reservoir lies almost entirely within the Ridge and Valley Ecoregion, with the Southwestern Appalachians ecoregion extending into the upper arms of several tributaries to the west (U.S. Environmental Protection Agency 2013). The Ridge and Valley Ecoregion contains long stretches of ridges with adjacent valleys that run in a southwestern-to-northeastern direction. The variety of landforms, soils, climate, and geology across the Ridge and Valley have allowed for an extremely diverse assemblage of animals, including migratory birds of conservation concern. Deciduous forests and mixed evergreen-deciduous forests provide wildlife habitat among the intense agriculture and urban sprawl (USGS 2016). Table 2-4 contains a summary of the land cover within and in the vicinity of Chickamauga Reservoir (Homer et al. 2015).

Oak-hickory deciduous forest is the most abundant forest type in the eastern U.S. and is prevalent in the Chickamauga Reservoir region. Some mixed deciduous-evergreen and evergreen forests are also present in this region. Numerous bird species nest in deciduous forests. Typical species include wild turkey, whip-poor-will, ruby-throated hummingbird, red-eyed vireo, black-throated green warbler, black-and-white warbler, ovenbird, hooded warbler, and scarlet tanager. Several additional migratory bird species of concern utilize these habitats in this area, including black-billed cuckoo, Kentucky warbler, peregrine falcon, red-headed woodpecker, wood thrush and worm-eating warbler (USFWS 2016a). Common mammal species of deciduous forests include black bear, white-tailed deer, red bat, eastern chipmunk, eastern gray squirrel, southern flying squirrels, white-footed mouse, and woodland voles, short-tailed shrew, gray fox, and bobcat.

Table 2-4. Land Cover on TVA Owned Parcels and within the Vicinity of Chickamauga Reservoir

Land Cover Type	TVA Property		Vicinity (5-mile radius)	
	Acres[1]	Percent Cover (%)	Acres[1]	Percent Cover (%)
Barren Land	99.7	0.6	1,698.4	0.3
Developed				
Developed, High Intensity	28.5	0.2	4,637.5	0.7
Developed, Medium Intensity	137.0	0.9	26,931.8	4.1
Developed, Low Intensity	311.8	1.9	9,213.5	1.4
Developed, Open Space	714.4	4.4	58,180.6	8.9
Forest				
Deciduous Forest	5,439.0	33.9	200,371.2	30.6
Evergreen Forest	1,620.7	10.1	66,735.0	10.2
Mixed Forest	1,543.1	9.6	47,105.5	7.2
Shrubland		0.0		0.0
Shrub/Scrub	458.8	2.9	30,988.2	4.7
Herbaceous				
Grassland/Herbaceous	632.8	3.9	28,900.0	4.4
Hay/Pasture	1,810.7	11.3	118,339.0	18.1
Planted/Cultivated				
Cultivated Crops	730.0	4.5	16,201.3	2.5
Wetlands/Open Water				
Emergent Herbaceous Wetlands	256.8	1.6	1,054.2	0.2
Woody Wetlands	1,419.0	8.8	6,082.4	0.9
Open Water	859.1	5.4	38,927.2	5.9
Total	**16,061.4**	**100**	**655,365.7**	**100**

[1] Source: Homer, et al. 2015

Deciduous forests and mixed evergreen-deciduous forests account for 44 percent of the land cover for the Chickamauga Reservoir parcels (Table 2-4). Evergreen forests make up an additional 10 percent of the land cover. Seeps, streams, and ephemeral ponds in deciduous forests provide habitat for numerous amphibians including American and Fowler's toads, green frog, northern cricket frog, and other frogs, and several salamanders including spotted and mole salamanders. Reptiles commonly found in deciduous forests especially near water include eastern fence lizard, ground skink, five-lined skink, eastern box turtle, eastern worm snake,

black racer, and ring-necked snake. The riparian zones along streams within deciduous forests provide nesting habitat for Acadian flycatchers, northern parula, and some migratory species of concern in this area, the Louisiana waterthrush, prothonotary warbler, and willow flycatcher (USFWS 2016a).

Evergreen and mixed evergreen-deciduous forests provide nesting for woodland birds including pine and yellow-throated warblers, and great crested flycatcher. Several additional migratory bird species of concern utilize these habitats including black-billed cuckoo, black-capped chickadee, fox sparrow, Kentucky warbler, northern saw-whet owl, prairie warbler, and red crossbill (USFWS 2016a). Portions of this forest type have been damaged by southern pine beetles in recent years. Several stands of dead pines exist on TVA lands, and TVA has performed salvage harvests in some stands. Dead pines provide foraging sites for woodpeckers and roosting sites for little brown and silver-haired bats. Other animals that inhabit evergreen and evergreen-deciduous forests but are not restricted to them include white-tailed deer, wild turkey, black bear, eastern mole, southern bog lemming, eastern kingsnake, smooth earthsnake, eastern fence lizard, six-lined racerunner, and a variety of salamanders, frogs, and toads, especially near wet areas.

Most of the TVA lands consist of narrow strips or small blocks of forest. Many of these lands are adjacent to larger contiguous forest blocks contributing habitat to area-sensitive species of wildlife that favor interior woodland habitats. Many of these adjacent lands were formerly owned by TVA and transferred to other federal agencies such as the U.S. Forest Service (USFS) and the National Park Service (NPS), and to state agencies. These lands combine with the TVA lands to form large blocks of forested habitat adjacent to the reservoir.

Non-forested herbaceous community types in the Chickamauga Reservoir region are dominated by pasturelands and hayfields. Herbaceous habitats, including grasslands, barrens, hayfields, and pastures account for 23 percent of the land cover on the reservoir parcels (see Table 2-4). Early successional habitats provide habitat for a variety of bird species including eastern bluebird, eastern meadowlark, American crow, and red-tailed hawk. Some additional migratory bird species of concern utilize these habitats in this area including short-eared owl and willow flycatcher (USFWS 2016a). Amphibians and reptiles that use these habitats include spring peeper, chorus frog, and common garter snake.

Bird and mammal diversity greatly increases at edge habitats especially those between forested areas bordered by early successional habitats. Birds commonly found at these edge habitats include wild turkey, great crested flycatcher, white-eyed vireo, Carolina wren, blue-gray gnatcatcher, brown thrasher, common yellowthroat, yellow-breasted chat, indigo bunting, eastern towhee, field and song sparrow, and orchard oriole. Several additional migratory bird species of concern utilize these habitats in this area including blue-winged warbler, loggerhead shrike, peregrine falcon, red-headed woodpecker, and willow flycatcher (USFWS 2016a). Mammals typically inhabiting edges include eastern cottontail, eastern harvest mouse, red fox, coyote, long-tailed weasel, and striped skunk.

The reservoir parcels provide wetlands, including wooded swamps and open water habitats and associated riparian zones that are used by a variety of wildlife. Common species include great blue heron, green heron, belted kingfisher, common yellowthroat, and northern parula. A total of 34 colonial nesting bird colonies/heronries have been observed within 3 miles of the reservoir. Fourteen of those colonies are located on TVA parcels (TVA 2016a). Many additional migratory bird species of concern utilize these habitats in this area including bald eagle, Louisiana waterthrush, prothonotary warbler, rusty blackbird, short-eared owl, and willow flycatcher (USFWS 2016a). Shallow embayments, especially those with emergent vegetation, provide foraging habitat for waterfowl. Common waterfowl include wood ducks, Canada geese, and mallards. Other waterfowl present periodically include American black duck, gadwall, green-winged teal, ring-necked duck, lesser scaup, common goldeneye, bufflehead, hooded merganser, and common merganser.

Shorebird use of the Chickamauga Reservoir is limited to shallow embayments and exposed mud flats. Species such as spotted sandpiper that forage along the margins of reservoirs and killdeer that are not restricted to foraging on mud flats are commonly observed. Common amphibians found in the riparian zones include green frog, eastern narrowmouth toad, and Fowler's toad. Reptiles include northern water snake, common snapping turtle, and painted turtles. Common mammals include mink, muskrat, raccoon, and American beaver.

A search of the TVA Natural Heritage database in May 2016 indicated that 29 caves are located within 3 miles of Chickamauga Reservoir. Four caves are located on TVA parcels (TVA 2016a).

For information on terrestrial ecology and potential impacts of the draft RLMP, see Volume I, Section 3.5.

2.2.3.1 Invasive Nonnative Species

Many of the planned TVA parcels around Chickamauga Reservoir contain a substantial amount of invasive nonnative species. Executive Order 13112 defines an invasive nonnative species as any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem; and whose introduction does or is likely to cause economic or environmental harm or harm to human health.

Based on a data search conducted on the USDA Natural Resources Conservation Service (NRCS) PLANTS Database (USDA NRCS 2016b), hydrilla (*Hydrilla verticillata*) is the only plant included on the Federal Noxious Weed List of 2010 reported from the counties encompassing Chickamauga Reservoir.

In addition, Southeastern Exotic Plant Pest Council provides a list of nonnative invasive species that could pose potential threats to native ecosystems and human health for each southeastern state. In reviewing the Tennessee exotic plant pest list (Tennessee Exotic Plant Pest Council 2009), there were 26 species occurring in Tennessee that pose a severe threat to native ecosystems observed in the Chickamauga Reservoir region (Table 2-5).

All of these species have the potential to adversely impact the native plant communities because of their potential to spread rapidly and displace native vegetation. TVA considers all of the species a severe threat to local plant communities.

In addition to invasive or non-native plant species discussed above, there are several exotic, non-native, and/or pest insect species and plant diseases that are known to occur within the counties encompassing Chickamauga Reservoir. These insects and diseases can have devastating impacts on native plant communities and human crops/fruits. The insects include: Japanese beetle (*Popillia japonica),* brown marmorated stink bug (*Halyomorpha halys*), emerald ash borer (*Agrilus planipennis*), hemlock woolly adelgid (A*delges tsugae*), kudzu bug (*Megacopta cribraria*), and southern pine beetle (*Dendroctonus frontalis*) (EDDMapS 2016). These species all have the potential to pose problems to native vegetation, wildlife, crops, landscaping and gardens, and/or overall ecosystems due to the lack of natural predators or diseases to help control their populations giving them the ability to out-compete native species.

Table 2-5. Invasive Non-native Plant Species that Pose a Severe Threat Known to Occur in Tennessee

Common Name	Scientific Name
Asian bittersweet	*Celastrus orbiculatus*
Autumn olive	*Elaeagnus umbellata var. parviflora*
Cheat grass	*Bromus tectorum*
Chinese privet	*Ligustrum sinense*
Chinese yam	*Dioscorea oppositifolia*
Common privet	*Ligustrum vulgare*
Common St. John's-wort	*Hypericum perforatum*
Hydrilla	*Hydrilla verticillata*
Japanese bloodgrass	*Imperata cylindrica*
Japanese honeysuckle	*Lonicera japonica*
Japanese knotweed	*Polygonum cuspidatum*
Japanese stiltgrass	*Microstegium vimineum*
Johnson grass	*Sorghum halepense*
Korean clover	*Kummerowia stipulacea*
Kudzu	*Pueraria montana var. lobata*
Mimosa	*Albizia julibrissin*
Multiflora rose	*Rosa multiflora*
Princess tree	*Paulownia tomentosa*
Purple loosestrife	*Lythrum salicaria*
Sericia lespedeza	*Lespedeza cuneata*
Sessile joyweed	*Alternanthera sessilis*
Shrubby bushclover	*Lespedeza bicolor*
Tree of heaven	*Ailanthus altissima*

Source: Tennessee Exotic Plant Pest Council 2009

The following plant diseases are also known to occur in the counties containing Chickamauga Reservoir: butternut canker (*Sirococcus clavigignenti-juglandacearum*), dogwood anthracnose (*Discula destructive*), fusiform rust (*Cronartium quercuum* f.sp. *fusiforme*), Heterobasidion root rots (*Heterobasidion* spp.), oak wilt (*Ceratocystis fagacearum*), and thousand cankers disease (*Geosmithia morbida*). Many of these diseases target certain plant species or groups of species, and can have serious impacts to local populations of those plants and trees.

There are several exotic, non-native, and/or pest terrestrial wildlife and other insect species that are known to occur within the region. These include: Asian tiger mosquito (*Aedes albopictus*), cat (feral) (*Felis catus*), and European starling (*Sturnus vulgaris*) (EDDMapS 2016). These species have the potential to pose problems to native wildlife and ecosystems due to their ability to out-compete native species and spread quickly. Some of these species can pose threats to

human health and safety. Asian tiger mosquitoes are known to transmit various diseases to humans.

2.2.4 Aquatic Ecology

Unimpounded rivers of the Ridge and Valley ecoregion typically consist of limestone rubble and bedrock riffles, sandy silty pools, and some extensive sand and gravel shoals (Etnier and Starnes 1993). These conditions exist in upper reaches of reservoirs where free-flowing streams transition into impounded reservoirs as well as in reservoir tailwaters. Hypolimnetic water discharged into the tailwaters can be very cold and have low dissolved oxygen content that may impair water quality. Subsequently, the stretch of river directly downstream of dams can have less diverse aquatic communities compared to pre-impoundment conditions. TVA has improved water quality below many of its hydrolelectric facilities including implementation of measures designed to mimic more natural riverine conditions (see Section 2.2.8).

Aquatic ecological conditions in streams and reservoirs are monitored under a number of TVA programs. Aquatic ecological conditions in the larger reservoirs have been monitored using the Reservoir Vital Signs Monitoring Program (RVSMP), which focuses on (1) physical and chemical characteristics of waters; (2) physical and chemical characteristics of sediments; (3) sampling the benthic macroinvertebrate community; and (4) fish assemblage sampling. The RVSMP data include annual fish sampling on tributary reservoirs from a two-year rotation sampling cycle. Ratings are based primarily on fish community structure and function, using an analysis tool known as the Reservoir Fish Assemblage Index (RFAI) (McDonough and Hickman 1999).

Both RFAI and benthic community samples are taken in the forebay area (near the dam) and transition zone of Chickamauga Reservoir where the reservoir transitions from a river-like environment to a lake-like one (Table 2-6). Chickamauga has rated fair in all of the samples since 2011 with the exception of the benthic community in both 2013 and 2015, which rates good.

Table 2-6. RFAI and Benthic Community Scores for Chickamauga Reservoir(2011-2015)

Year	RFAI Scores		Benthic Community Scores	
	Forebay	Transition	Forebay	Transition
2011	Fair	Fair	Fair	Fair
2013	Fair	Fair	Good	Fair
2015	Fair	Fair	Good	Fair

Source: TVA 2016b

human health and safety. Asian tiger mosquitoes are known to transmit various diseases to humans.

2.2.4 Aquatic Ecology

Unimpounded rivers of the Ridge and Valley ecoregion typically consist of limestone rubble and bedrock riffles, sandy silty pools, and some extensive sand and gravel shoals (Etnier and Starnes 1993). These conditions exist in upper reaches of reservoirs where free-flowing streams transition into impounded reservoirs as well as in reservoir tailwaters. Hypolimnetic water discharged into the tailwaters can be very cold and have low dissolved oxygen content that may impair water quality. Subsequently, the stretch of river directly downstream of dams can have less diverse aquatic communities compared to pre-impoundment conditions. TVA has improved water quality below many of its hydrolelectric facilities including implementation of measures designed to mimic more natural riverine conditions (see Section 2.2.8).

Aquatic ecological conditions in streams and reservoirs are monitored under a number of TVA programs. Aquatic ecological conditions in the larger reservoirs have been monitored using the Reservoir Vital Signs Monitoring Program (RVSMP), which focuses on (1) physical and chemical characteristics of waters; (2) physical and chemical characteristics of sediments; (3) sampling the benthic macroinvertebrate community; and (4) fish assemblage sampling. The RVSMP data include annual fish sampling on tributary reservoirs from a two-year rotation sampling cycle. Ratings are based primarily on fish community structure and function, using an analysis tool known as the Reservoir Fish Assemblage Index (RFAI) (McDonough and Hickman 1999).

Both RFAI and benthic community samples are taken in the forebay area (near the dam) and transition zone of Chickamauga Reservoir where the reservoir transitions from a river-like environment to a lake-like one (Table 2-6). Chickamauga has rated fair in all of the samples since 2011 with the exception of the benthic community in both 2013 and 2015, which rates good.

Table 2-6. RFAI and Benthic Community Scores for Chickamauga Reservoir(2011-2015)

Year	RFAI Scores		Benthic Community Scores	
	Forebay	Transition	Forebay	Transition
2011	Fair	Fair	Fair	Fair
2013	Fair	Fair	Good	Fair
2015	Fair	Fair	Good	Fair

Source: TVA 2016b

The fish community typically rates good or at the high end of the fair range. While the numbers of individuals and variety of fish species collected were slightly fewer than expected, a greater proportion of those were tolerant of poorer water quality conditions. The fish species collected during the RVSMP sampling efforts represent typical species found in large river and lentic habitats (Table 2-7). In 2011, the fish community composition was dominated by a few species such as bluegill, gizzard shad, and non-native silversides, which lowered the ratings at these sites.

Table 2-7. Fish Species in Chickamauga Reservoir

Common Name	Scientific Name
Black buffalo	*Ictiobus niger*
Black redhorse	*Moxostoma duquesnei*
Blue catfish	*Ictalurus furcatus*
Blueback herring	*Alosa aestivalis*
Bluegill	*Lepomis macrochirus*
Bluntnose minnow	*Pimephales notatus*
Brook silverside	*Labidesthes sicculus*
Bullhead minnow	*Pimephales vigilax*
Channel catfish	*Ictalurus punctatus*
Chestnut lamprey	*Ichthyomyzon castaneus*
Common carp	*Cyprinus carpio*
Dusky darter	*Percina sciera*
Fathead minnow	*Pimephales promelas*
Flathead catfish	*Pylodictis olivaris*
Freshwater drum	*Aplodinotus grunniens*
Gizzard shad	*Dorosoma cepedianum*
Golden redhorse	*Moxostoma erythrurum*
Golden shiner	*Notemigonus crysoleucas*
Green sunfish	*Lepomis cyanellus*
Largemouth bass	*Micropterus salmoides*
Largescale stoneroller	*Campostoma oligolepis*
Logperch	*Percina caprodes*
Longear sunfish	*Lepomis megalotis*
Longnose gar	*Lepisosteus osseus*
Mississippi silverside	*Menidia audens*
Northern hog sucker	*Hypentelium nigricans*
Quillback	*Carpiodes cyprinus*
Redbreast sunfish	*Lepomis auritus*
Redear sunfish	*Lepomis microlophus*
River redhorse	*Moxostoma carinatum*
Sauger	*Stizostedion canadense*

Common Name	Scientific Name
River redhorse	*Moxostoma carinatum*
Sauger	*Stizostedion canadense*
Silver redhorse	*Moxostoma anisurum*
Skipjack herring	*Alosa chrysochloris*
Smallmouth bass	*Micropterus dolomieu*
Smallmouth buffalo	*Ictiobus bubalus*
Snubnose darter	*Etheostoma simoterum*
Spotfin shiner	*Cyprinella spiloptera*
Spotted bass	*Micropterus punctulatus*
Spotted gar	*Lepisosteus oculatus*
Spotted sucker	*Minytrema melanops*
Steelcolor shiner	*Cyprinella whipplei*
Striped bass	*Morone saxatilis*
Stripetail darter	*Etheostoma kennicotti*
Threadfin shad	*Dorosoma petenense*
Walleye	*Stizostedion vitreum*
Warmouth	*Lepomis gulosus*
White bass	*Morone chrysops*
White crappie	*Pomoxis annularis*
Whitetail shiner	*Cyprinella galactura*
Yellow bass	*Morone mississippiensis*
Yellow bullhead	*Ameiurus natalis*
Yellow perch	*Perca flavescens*

Source: TVA 2016c

Bottom life scored at the low end of the fair range at the mid-reservoir in 2011, lower than in previous years. The lower scores were likely due in part to the low dissolved oxygen conditions that developed along the reservoir bottom.

2.2.4.1 Invasive Nonnative Aquatic Species

Although there are many exotic or introduced aquatic species within the region, there are a few species that are considered more detrimental due to their ability to have broad impacts to overall aquatic systems as well as direct impacts to humans. These include Asian carp, especially bighead carp (*Hypophthalmichthys nobilis*) and silver carp (*Hypophthalmichthys molitrix*) (EDDMapS 2016), and zebra mussels (*Dreissena polymorpha*).

Asian carp cause serious damage to the native fish populations in the lakes and rivers that they infest because they out-compete other fish for food and space. Carp are also thought to lower water quality, which can kill off sensitive organisms like native freshwater mussels. Asian carp

have been known to dominate entire streams, effectively pushing out the native species. Asian carp are also known to pose danger to humans due to their habit of jumping out of the water and striking boaters and water skiers and damaging boats and equipment.

Zebra mussels are notorious for their biofouling capabilities by colonizing water supply pipes of hydroelectric and nuclear power plants, public water supply plants, and industrial facilities. They colonize pipes constricting flow, therefore reducing the intake in heat exchangers, condensers, firefighting equipment, and air conditioning and cooling systems. Navigational and recreational boating can be affected by increased drag due to attached mussels. Small mussels can get into engine cooling systems causing overheating and damage. Navigational buoys have been sunk under the weight of attached zebra mussels. Zebra mussels can have profound effects on the ecosystems they invade. They primarily consume phytoplankton, but other suspended material is filtered from the water column including bacteria, protozoans, zebra mussel veligers, other microzooplankton and silt (Benson et al. 2016). For information on aquatic ecology and potential impacts of the draft RLMP, see Volume I, Section 3.6.

2.2.5 Threatened and Endangered Species

TVA biologists and natural resource specialists used the TVA Natural Heritage database to assess the endangered and threatened species within and around Chickamauga Reservoir. The TVA Natural Heritage database was created to ensure that environmental compliance activities are conducted in a consistent manner across the TVA Region and that these activities meet the requirements of NEPA and the Endangered Species Act. Federally listed and state-listed species identified within the Chickamauga Reservoir counties from the TVA Natural Heritage database are presented in Table 2-8. For the purpose of this document state-listed species includes those that are being tracked, in need of management, candidates, proposed for listing and of special concern. As noted below, there is one plant species that is both federal and state-listed and four state-listed plants species known to occur on TVA parcels on Chickamauga Reservoir. There are six terrestrial wildlife species known to occur on TVA parcels, however, suitable habitat is present for many of the other listed species. No listed aquatic species are known to occur within TVA parcels, but 12 are known to occur in the reservoir adjacent to the parcels.

Table 2-8. Federally and State-listed Species in the Chickamauga Reservoir Counties

Common Name	Scientific Name	Status*	
		Federal	State (Rank)
Mammals			
Allegheny woodrat	*Neotoma magister*	--	D (S3)
Common shrew	*Sorex cinereus*	--	D (S4)
Eastern small-footed bat	*Myotis leibii*	--	D (S2S3)
Eastern spotted skunk	*Spilogale putorius*	--	TRKD (S3)
Gray bat	*Myotis grisescens*	LE	E (S2)
Indiana bat	*Myotis sodalis*	LE	E (S1)
Meadow jumping mouse	*Zapus hudsonius*	--	D (S4)
Northern long-eared bat	*Myotis septentrionalis*	LE	--(S1S2)
Smoky shrew	*Sorex fumeus*	--	D (S4)
Southeastern shrew	*Sorex longirostris*	--	D (S4)
Southern Appalachian woodrat	*Neotoma floridana haemataoreia*	--	D (S2)
Southern bog lemming	*Synaptomys cooperi*	--	D (S4)
Woodland jumping mouse	*Napaeozapus insignis*	--	D (S4)
Birds			
Appalachian Bewick's wren	*Thryomanes bewickii altus*	SH-	--
Bachman's sparrow	*Peucaea aestivalis*	--	E (S1)
Bald eagle	*Haliaeetus leucocephalus*	DM	D (S3)
Common barn owl	*Tyto alba*		D (S3)
Golden-winged warbler	*Vermivora chrysoptera*	--	D (S3B)
Great egret	*Ardea alba*	--	D (S2)
King rail	*Rallus elegans*	--	D (S2)
Least bittern	*Ixobrychus exilis*	--	D (S2)
Peregrine falcon	*Falco pergrinus*	PS:LE	E (S1)
Sharp-shinned hawk	*Accipiter striatus*	PS	D (S3)
Swainson's warbler	*Limnothlypis swainsonii*	--	D
Virginia rail	*Rallus limicola*	--	TRKD (S1)
Reptiles			
Coal skink	*Plestiodon anthracinus*	--	D (S1)
Eastern slender glass lizard	*Ophisaurus attenuates longicaudus*	--	D (S3)
Northern pine snake	*Pituophis melanoleucus*	--	T (S3)
Amphibians			
Berry cave salamander	*Gyrinophilus gulolineatus*	C	T (S1)
Hellbender	*Cryptobranchus alleganiensis*	PS	D (S3)
Seepage Salamander	*Desmognathus aeneus*	--	D (S1)
Tennessee cave salamander	*Gyrinophilus palleucus*	--	T (S2)
Crustaceans			
Chickamauga crayfish	*Cambarus extraneus*	--	T (S1S2)

Common Name	Scientific Name	Status*	
		Federal	State (Rank)
Fish			
Amber darter	*Percina antesella*	LE	E (S1)
Blotchside logperch	*Percina burtoni*	--	D (S2)
Blue shiner	*Cyprinella caerulea*	LT	E (S2)
Bridled darter	*Percina kusha*	--	TRKD (S1)
Coldwater darter	*Etheostoma ditrema*	--	T (S1)
Coosa chub	*Macrhybopsis aestivalis*	--	TRKD (S1)
Conasauga logperch	*Percina jenkinsi*	LE	E (S1)
Flame chub	*Hemitremia flammea*	--	D (S3)
Frecklebelly madtom	*Noturus munitus*	--	T (S1)
Highfin carpsucker	*Carpiodes velifer*	--	D (S2S3)
Holiday darter	*Etheostoma brevirostrum*	--	T (S1)
Lake sturgeon	*Acipenser fulvescens*	--	E (S1)
Laurel dace	*Chrosomus saylori*	LE	E (S1)
Lined chub	*Notropis lineapunctata*	--	D (S1)
Mobile logperch	*Percina kathae*	--	TRKD (S2S3)
Snail darter	*Percina tanasi*	LT	T (S1)
Southern brook lamprey	*Ichthyomyzon gagei*	--	D (S1)
Tangerine darter	*Percina aurantiaca*	--	D (S3)
Tennessee dace	*Chrosomus tennesseensis*	--	D (S3)
Trispot darter	*Etheostoma trisella*	--	T (S1)
Gastropods			
Blue-gray Glyph	*Glyphyalinia ocoae*	--	TRKD (S1)
Cohutta slitmouth	*Stenotrema cohuttense*	--	TRKD (S2)
Hiwassee Pebblesnail	*Somatogyrus* sp. 2	--	TRKD (S1)
Knotty elimia	*Elimia interrupta*	--	TRKD (S1)
Ocoee covert	*Fumonelix archeri*	--	TRKD (S1)
Ornate rocksnail	*Lithasia geniculata*	--	TRKD (S2)
Smooth mudalia	*Leptoxis virgata*	--	TRKD (S1)
Insects			
Allegheny snaketail	*Ophiogomphus incurvatus alleghaniensis*	--	TRKD (S1)
Cherokee clubtail	*Gomphus consanguis*	--	TRKD (S1)
Edmund's snaketail	*Ophiogomphus edmundo*	--	TRKD (S1)
Norton's cave beetle	*Pseudanophthalmus nortoni*	--	TRKD (S1)
Mussels			
Alabama creekmussel	*Strophitus connasaugaensis*	--	TRKD (S1)
Alabama moccasinshell	*Medionidus acutissimus*	LT	T (S1)
Coosa moccasinshell	*Medionidus parvulus*	LE	E (S1)
Cumberland bean	*Villosa trabalis*	LE	END (S1)
Cumberland monkeyface	*Quadrula intermedia*	LE	E (S1)

Common Name	Scientific Name	Status*	
		Federal	State (Rank)
Dromedary pearlymussel	*Dromus dromas*	LE	E (S1)
Fanshell	*Cyprogenia stegaria*	LE	E (S1)
Five-lined pocketbook	*Lampsilis altilis*	LT	T (S1S2)
Georgia pigtoe	*Pleurobema hanleyianum*	LE	TRKD (S1)
Orange-foot pimpleback	*Plethobasus cooperianus*	LE	E (S1)
Ovate clubshell	*Pleurobema perovatum*	LE	E (SH)
Oyster mussel	*Epioblasma capsaeformis*	LE	END (S1)
Painted clubshell	*Pleurobema chattanoogaense*	--	TRKD (S1?)
Pink mucket	*Lampsilis abrupta*	LE	E (S2)
Pyramid pigtoe	*Pleurobema rubrum*	--	TRKD (S1S2)
Rough pigtoe	*Pleurobema plenum*	LE	E (S1)
Sheepnose	*Plethobasus cyphyus*	LE	TRKD (S2S3)
Shiny pigtoe pearlymussel	*Fusconaia cor*	LE	E (S1)
Slabside pearlymussel	*Pleuronaia dolabelloides*	LE	TRKD (S2)
Southern pigtoe	*Pleurobema georgianum*	LE	E (S1)
Southern rainbow	*Villosa vibex*	--	TRKD (S2)
Tan riffleshell	*Epioblasma florentina walkeri*	LE	E (S1)
Tennessee clubshell	*Pleurobema oviforme*	--	TRKD (S2S3)
Triangular kidneyshell	*Ptychobranchus greenii*	LE	E (S1)
Tuberculed blossom pearlymussel	*Epioblasma torulosa*	LE	EXTI (SX)
Upland combshell	*Epioblasma metastriata*	LE	E (SH)
Plants			
Alabama snow-wreath	*Neviusia alabamensis*	--	T (S2)
American chestnut	*Castanea dentata*	--	SPCO (S2S3)
American ginseng	*Panax quinquefolius*	--	S-CE (S3S4)
American pillwort	*Pilularia americana*	--	SPCO (S1S2)
Ash-leaved bush-pea	*Thermopsis fraxinifolia*	--	T (S3)
Bay starvine	*Schisandra glabra*	--	T (S2)
Bitter cress	*Cardamine flagellifera*	--	T (S2)
Bog oat-grass	*Danthonia epilis*	--	SPCO (S1S2)
Blomquist leafy liverwort	*Lejeunea blomquistii*	--	SPCO (S1S2)
Branching Whitlow-wort	*Draba ramosissima*	--	SPCO (S2)
Broadleaf Bunchflower	*Melanthium latifolium*	--	E (S1S2)
Broad-leaved tickseed	*Coreopsis latifolia*	--	E (S1S2)
Butternut	*Juglans cinerea*	--	T (S3)
Button snakeroot	*Eryngium integrifolium*	--	T (S1)
Chokecherry	*Prunus virginiana*	--	SPCO (S1)
Compass-plant	*Silphium lacinatum*	--	T (S2)
Cow parsnip	*Heracleum maximum*	--	SPCO (S2)
Creekgrass	*Potamogeton epihydrus*	--	SPCO (S1S2)

Common Name	Scientific Name	Status*	
		Federal	State (Rank)
Decumbent trillium	*Trillium decumbens*	--	E (S1)
Dwarf filmy-fern	*Trichomanes pertersii*	--	T (S2)
Dwarf milkwort	*Polygala nana*	--	E (S1)
Eastern turkeybeard	*Xerophyllum asphodeloides*	--	T (S3)
Florida hedge-hyssop	*Gratiola floridana*	--	E (S1)
Four-flowered loosestrife	*Lysimachia quadriflora*	--	E (S1)
Fragrant bedstraw	*Galium uniflorum*	--	SPCO (S1)
Fraser loosestrife	*Lysimachia fraseri*	--	E (S2)
Giant hyssop	*Agastache scrophulariifolia*	--	T (S1S2)
Gibbous panic-grass	*Sacciolepis striata*	--	SPCO (S1)
Granite gooseberry	*Ribes curvatum*	--	T (S1)
Green-and-gold	*Chrysogonum virginianum*	--	T (S2)
Hairy umbrella-sedge	*Fuirena squarrosa*	--	SPCO (S1)
Heller's catfoot	*Pseudognaphalium helleri*	--	SPCO (S2)
Horsesugar	*Symplocos tinctoria*	--	SPCO (S2)
Lance-leaf trillium	*Trillium lancifolium*	--	E (S1)
Large cranberry	*Vaccinium macrocarpon*	--	T (S2)
Large-flowered skullcap	*Scutellaria montana*	LT	T (S4)
Larkspur-leaved coreopsis	*Coreopsis delphiniifolia*	--	E (S1)
Laurel-leaf greenbriar	*Smilax laurifolia*	--	SPCO (S1)
Leather-flower	*Clematis glaucophylla*	--	E (S1)
Limestone fame-flower	*Phemeranthus calcaricus*	--	SPCO (S3)
Liverwort	*Metzgeria uncigera*	--	SPCO (S1)
Manna-grass	*Glyceria acutiflora*	--	SPCO (S2)
Marsh pe	*Lathyrus palustris*	--	SPCO (S1)
Maryland milkwort	*Polygala mariana*	--	SPCO (S1)
Menge's fame-flower	*Phemeranthus mengesii*	--	T (S2)
Mountain bittercress	*Cardamine clematits*	--	T (S2)
Mountain bush-honeysuckle	*Dierviilla sessileifolia* var. *rivularis*	--	T (S2)
Mountain honeysuckle	*Lonicera dioica*	--	SPCO (S2)
Naked-stem sunflower	*Helianthus occidentalis*	--	SPCO (S2)
Nestronia	*Nestronia umbellula*	--	E (S1)
Nevius' stonecrop	*Sedum nevii*	--	E (S1)
Northern bush-honeysuckle	*Diervilla lonicera*	--	T (S2)
Obovate marshallia	*Marshallisa obovata*	--	E (S1)
Ovate catchfly	*Silene ovata*	--	E (S2)
Ovate-leaved arrowhead	*Sagittaria platyphylla*	--	SPCO (S2S3)
Pale corydalis	*Corydalis sempervirens*	--	E (S1S2)
Panic-grass	*Dicanthelium acuminatum* spp. *leucothrix*	--	SPCO (S1)

Common Name	Scientific Name	Status*	
		Federal	State (Rank)
Prairie-dock	*Silphium pinnatifidum*	--	T (S2)
Prairie goldenrod	*Solidago ptarmicoides*	--	E (S1S2)
Purple milkweed	*Asclepias purpurascens*	--	SPCO (S1)
Rose-gentian	*Sabatia capitata*	--	E (S2)
Roundleaf fameflower	*Phemeranthus teretifolius*	--	T (S2)
Roundleaf serviceberry	*Ameleanchier sanguinea*	--	T (S2)
Ruth's golden aster	*Pityopsis ruthii*	--	E (S1)
Sedge (bristly sedge)	*Carex comosa*	--	T (S2)
Sharp's lejeunea	*Lejeunea sharpii*	--	E (S1S2)
Slender blazing-star	*Liatris cylindracea*	--	T (S2)
Small purple fringe orchid	*Platanthera psycodes*	--	SPCO (S2)
Small whorled pogonia	*Isotria medeoloides*	LT	E (S1)
Small's stonecrop	*Diamorpha smallii*	--	E (S1S2)
Soft-haried thermopsis	*Thermopsis mollis*	--	SPCO (S2S3)
Southern lobelia	*Lobelia amoena*	--	T (S1S2)
Southern nodding trillium	*Trillium regelli*	--	E (S2)
Southern morning-glory	*Stylisma humistrata*	--	T (S1)
Spreading false-foxglove	*Aureolaria patula*	--	SPCO (S3)
Stachys	*Stachys clingmanii*	--	T (S1S2)
Swamp lousewort	*Pedicularis lanceolata*	--	SPCO (S1S2)
Sweet pinesap	*Monotropsis odorata*	--	T (S2)
Sweetbay magnolia	*Magnolia viriniana*	--	T (S2)
Tawny cotton-grass	*Eriophorum virginicum*	--	E (S1S2)
Tennessee pondweed	*Potomogeton tennesseensis*	--	T (S2)
Toothed sedge	*Cyperus dentatus*	--	SPCO (S1)
Virginia chainfern	*Woodwardia virginica*	--	SPCO (S2)
Virginia spiraea	*Spiraea virginiana*	LT	E (S2)
Western false gromwell	*Onosmodium molle* ssp. *occidentale*	--	T (S1S2)
White fringeless orchid	*Platanthera integrilabia*	THR	E (S2S3)
White-prairie clover	*Dalea candida*	--	T (S2)
Wood lily	*Lilium philadelphicum*	--	E (S1)
Yellow honeysuckle	*Lonicera flava*	--	T (S1)
Yellow jessamine	*Gelsemium sempervirens*	--	SPCO (S1S2)

***Federal status abbreviations**: LE = Listed endangered, LT = Listed threatened; PS = Partial Status; C = Candidate; DM = Recovered, Delisted, and Being Monitored

State status abbreviations: E = Endangered; T = Threatened; D = In need of management; SPCO= Special concern; TRKD = Tracked by state natural heritage program; S-CE = Special Concern - Commercially Exploited

State rank abbreviations: S1 = Critically imperiled, often with five or fewer occurrences, S2 = Imperiled, often with <20 occurrences; S3 = Rare or uncommon, often with <80 occurrences; S4 = Widespread, abundant, and apparently secure within the state, but with cause for long-term concern; SX = Believed to be extirpated from the state; SH = Of historical occurrence in Tennessee, e.g. formally part of the established biota, with the expectation that it may be rediscovered; S#S# = Denotes a range of ranks because the exact rarity of the element is uncertain (e.g., S1S2) ; S? = Unranked at this time or rank uncertain

Source: TVA 2016a

In order to determine which of the species listed in each county are known to occur in the general vicinity of the reservoir, a more refined database search was conducted. Database searches are based on the following criteria: (1) distance, (2) element occurrence rank values, and (3) species or type of element present. Accordingly, plants are assessed within a 5-mile radius, aquatic species within a 10-mile radius, and terrestrial species within a 3-mile radius.

For information on threatened and endangered species and the potential impacts of the draft RLMP, see Volume I, Section 3.7.

2.2.5.1 Plants

Reviews of the TVA Natural Heritage database indicated that one plant species federally listed as threatened, the large-flowered skullcap, is located within 5 miles of Chickamauga Reservoir. The large-flowered skullcap is also listed as listed as threatened by the state of Tennessee. Eleven TVA parcels are known to contain populations of large-flowered skullcap: eight would be allocated to Zone 3 (Sensitive Resource Management), two would be allocated to Zone 4 (Natural Resources Conservation), and one parcel would be allocated to Zone 2 (Project Operations).

In addition to the large-flowered skullcap, 28 other state-listed plants have been documented within 5 miles of Chickamauga Reservoir. Four of those plant species, including Alabama snow-wreath, American ginseng, northern bush-honeysuckle, and white prairie-clover, have been recorded on TVA parcels associated with Chickamauga Reservoir. All of these species are located on parcels that would be allocated to Zone 3 (Sensitive Resource Management), Zone 4 (Natural Resources Conservation), or Zone 6 (Developed Recreation) under the draft RLMP (Alternative B).

Habitat requirements for each of the listed plant species are presented in Table 2-9.

Table 2-9. Habitat Requirements for Plant Species of Conservation Concern within 5 Miles of Chickamauga Reservoir

Common Name	Habitat Requirements[1]	Suitable Habitat Present
Alabama snow-wreath	Upland woods	Yes
American chestnut	Mesic to dry forests	Likely
American ginseng	Humus-rich woodland soil and prefers shaded, north-facing hillsides	Yes
Creekgrass	Lakes and streams	Likely

Common Name	Habitat Requirements[1]	Suitable Habitat Present
Florida hedge-hyssop	Wooded swamps	Likely
Fragrant bedstraw	Dry woods	Likely
Gibbous panic-grass	Floodplains and shallow pools	Likely
Granite gooseberry	Rocky woods	Likely
Heller's catfoot	Dry sandy woods	Likely
Large-flowered skullcap	Escarpments and dry woods	Yes
Maryland milkwort	Sandy alluvial woods and disturbed areas	Likely
Menge's fame-flower	Dry rock ledges	Likely
Naked-stem sunflower	Limestone glades and barrens	Likely
Nestronia	Upland woods	Likely
Northern bush-honeysuckle	Rocky woodlands and bluffs	Yes
Ovate-leaved arrowhead	Swamps and emergent wetlands	Likely
Pale corydalis	Dry or rocky woods	Likely
Prairie dock	Barrens	Likely
Prairie goldenrod	Barrens	Likely
Purple milkweed	Barrens	Likely
Rose-gentian	Dry open woods, powerlines	Likely
Roundleaf fameflower	Dry sandy rock outcrops	Likely
Sedge (bristly sedge)	Swamps	Likely
Slender blazing-star	Barrens in high quality prairie areas	Likely
Small's stonecrop	Sandstone outcrops	Likely
Spreading false-foxglove	Oak woods and edges	Likely
Western false gromwell	Glades	Likely
White-prairie clover	Barrens	Yes
Yellow jessamine	Dry openings	Likely

[1] Source: TDEC 2014

For information on plant communities and potential impacts of the draft RLMP, see Volume I, Section 3.5.3.

2.2.5.2 Terrestrial Wildlife

Reviews of the TVA Natural Heritage database indicate that three federally-listed and 21 state-listed species have been recorded within 3 miles of the reservoir (Table 2-10). Six of these listed species have been recorded on TVA parcels. Indiana bats could be present in this area, but have not been documented on TVA parcels.

Table 2-10. Habitat Requirements for Wildlife Species of Conservation Concern within 3 Miles of Chickamauga Reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
Amphibians		
Berry cave salamander	Aquatic, cave obligate[4]	Yes. Known to occur in a TVA managed cave
Hellbender	Creeks and Rivers[4]	Likely
Tennessee cave salamander	Aquatic, cave obligate[4]	Yes. Known to occur in a TVA managed cave
Birds		
Appalachian Bewick's wren	Shrubby areas, open woodlands near rivers and streams. Rare east of the Mississippi river.[3]	Likely
Bachman's sparrow	Dry open mature pine forest with grass understory, found clear cuts, fallow fields[4]	Likely
Bald eagle	Forested areas near open water.[4] In TN, overwintering on reservoirs and large rivers.[3]	Yes
Common barn-owl	Nesting: cliffs, hollow trees, buildings, open forests; Foraging: dense grass fields including marshes[4]	Yes
Great egret	Wetlands and shallow water[4]	Yes. Known from Hiwassee
King rail	Wetlands[4]	Yes
Least bittern	Open water[4]	Likely
Peregrine falcon	Nesting: Ledges and opening of cliffs, bluffs, buildings, and occasionally trees. Foraging: Variety of open habitats including wetlands, fields, and lakeshores	Likely
Sharp-shinned hawk	Forested areas[4] Uncommon summer resident [2]; more frequently seen during migration[3]	Likely, however, likely to be transient
Virginia rail	Wetlands[1]	Likely
Invertebrates		
Norton's cave beetle	Burrow in moist soil often near streams or drip lines[4]	Likely
Mammals		
Allegheny woodrat	Rocky outcrops, cliffs. Usually at higher elevations[4]	Likely
Gray bat	Caves[4]	Yes
Indiana bat	Caves and mature forests[4]	Yes
Meadow jumping mouse	Moist lowlands, wetlands[4]	Yes
Northern long-eared bat	Caves and mature forests[4]	Yes
Southeastern shrew	Various habitats, appears to prefer moist-wet areas[4]	Yes
Reptiles		
Eastern slender glass lizard	Dry open woods and grasslands[3]	Likely
Northern pine snake	Pine or pine/oak woodland on sandy soils[4]	Likely

[1]Source: Kennedy et al. 2013
[2]Source: Summershoe and Sloan 2015
[3]Source: TWRA 2016
[4]Source: NatureServe 2016

For information on terrestrial wildlife and potential impacts of the draft RLMP, see Volume I, Section 3.5.4.

2.2.5.2.1 Amphibians

Both the Berry Cave salamander and the Tennessee cave salamander, aquatic cave obligate species, have been recorded in a TVA parcel that would be allocated to Zone 3 (Sensitive Resource Management). No known occurrences of the hellbender have been recorded in a TVA parcel, but records do occur in tributaries associated with Chickmauga Reservoir. Due to the abundance of creeks and streams, there may be suitable habitat present to support this species.

2.2.5.2.2 Birds

There are no records of the least bittern on any TVA owned parcels or within Chickamauga Reservoir. However, there are two recorded sightings (nests observed in 1967 and 2007) within 3 miles of the reservoir.

The last recorded sighting of the common barn owl on a TVA parcel at Chickamauga Reservoir was in 1988. There have been more recent records in 2003 and 2004 in Hamilton County. While there are no records of a more recent sighting, suitable habitat that could support the barn owl is present within Chickamauga Reservoir.

The king rail was last observed in Amnicola Marsh in 1992; however, abundant wetland habitat that may support this species is present.

The TVA Natural Heritage database does not contain any recorded sightings of the sharp-shinned hawk. These hawks are uncommon nesters in this part of Tennessee and are more likely to be observed as a transient species during migration.

Peregrine falcons are adaptable to a variety of habitats. One well-known nesting pair has been recorded in the TVA Natural Heritage database and was last observed in 2007. While this siting was not located within Chickamauga Reservoir, the reservoir does contain suitable habitat for the peregrine falcon due to an abundance of suitable foraging and nesting habitat.

Great egrets are another wetland species that have a limited number of reported sightings in the TVA dataset, though this species is a fairly common summer resident and spring/fall visitor. Two recorded sightings occurred in the 1990s on TVA parcels with additional records of sightings from Sugar Creek and Gunstocker Creek in 2008 and 2009, respectively. Two recorded sightings occurred in the 1990s on TVA parcels. Due to the abundant wetland habitat, there is a potential for great egrets in this area.

There are many confirmed bald eagle sightings around the Chickamauga Reservoir on parcels that would be designated as Zone 3 (Sensitive Resource Management), Zone 4 (Natural Resource Conservation), or Zone 6 (Developed Recreation) under the draft RLMP (Alternative B). Most of these parcels would likely continue to provide suitable nesting and foraging habitat for bald eagles, especially those areas within Zones 3 and 4.

Bachman's sparrow was observed once in 1969; however it has been determined that the area where that observation occurred is no longer suitable habitat.

The Appalachian Bewick's wren has not been observed near the reservoir since 1908 and is generally considered rare east of the Mississippi River. Although suitable habitat is technically present, future observations of this species are unlikely.

2.2.5.2.3 Invertebrates

The Norton's cave beetle is a cave obligate species recorded within Rhea County, but is not known to occur within 3 miles of Chickamauga Reservoir. It is primarily subterranean with no means, besides flooding, to move between caves. Because this species is not known to occur in any of the caves around Chickamauga Reservoir, it is unlikely to be present in the area.

2.2.5.2.4 Mammals

The southeastern shrew has been recorded in Hamilton County, but is not known to occur within 3 miles of Chickamauga Reservoir. This small mammal occurs in a variety of habitats, but is most frequently seen in moist to wet areas; therefore wetland habitat around the reservoir is potentially suitable habitat to support this species.

The gray bat roosts in caves year round. Twenty-nine caves exist within 3 miles of the reservoir and four of these caves are on TVA parcels. Four caves, two of which are on TVA parcels, are known to have gray bats and tricolored bats. One of these two also has little brown, big brown, and northern long-eared bats while the other has records of Berry Cave salamander and Tennessee cave salamander.

Northern long-eared bats and Indiana bats use caves for winter hibernacula and roost in trees with exfoliating bark, cavities, or other features that provide concealment during summer months. As mentioned above, northern long-eared bats are known to occur within caves on TVA parcels and it is likely that summer roosting habitat is also present within forested areas and small wood lots on other parcels. No Indiana bats have been recorded in the Chickamauga Reservoir area, but suitable habitat is present.

Allegheny woodrats are solitary animals that live in mounds made of sticks or other detritus in areas of rocky outcroppings and cliffs. This species has been historically recorded in Hamilton County northwest of Soddy Daisy in 1908 and 1910, but no current records are known to occur on the parcels surrounding the reservoir.

2.2.5.3 Aquatic Species

In the counties surrounding Chickamauga Reservoir, there are 39 aquatic species listed as federally or state threatened or endangered, including crustaceans, fish, gastropods, and mussels (see Table 2-8). An additional 15 state-listed aquatic species in those counties are being tracked by the Natural Heritage Program. Within 10 miles of the reservoir, there are records of 42 federal or state-listed threatened or endangered aquatic species (Table 2-11). There are no records of aquatic species on any TVA parcels; however, there are records of 12 species within the reservoir.

Table 2-11. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Chickamauga Reservoir

Common Name	Habitat Requirement[1]	Suitable Habitat Present
Fish		
Ashy darter	Medium rivers, slow moving pools with gravel substrates	Unlikely as records are historic
Banded darter	Rocky riffles of creeks and rivers	Likely
Bigeye chub	Small to medium tributaries with gravel substrate. Does not tolerate siltation	Likely
Blotchside logperch	Riffles and gravel runs of clear, small to medium rivers	Likely
Flame chub	Springs and spring fed streams	Unlikely as records are historic and there are no springs.
Freshwater drum	Open water of rivers or lakes with mud bottoms	Likely
Greenside darter	Medium to large creeks and small to medium rivers. Riffles with gravel substrate, bedrock pools, quiet lakeshores	Likely
Highfin carpsucker[2]	Pools and backwaters of creeks and rivers with gravel or sandy bottoms.	Yes
Lake sturgeon[2]	Bottoms of large clean freshwater rivers and lakes	Somewhat likely, historic
Laurel dace	In pools and show runs of headwaters and creeks with rocky substrate.	Unlikely
Logperch	Creeks to rivers to lakes. Often associated with bottom debris	Likely
Popeye shiner	Large creeks to medium rivers with warm, clear water and gravel substrate	Somewhat likely
Redline darter	Riffles of clear creeks and small to medium rivers	Somewhat likely
River chub	Small to medium rivers in flowing pools and swift currents	Somewhat likely
Rock bass	Small cool vegetated lakes, littoral regions of streams. Always with silt free substrate and permanent flow.	Unlikely
Snail darter[2]	Medium sized rivers in gravel and sandy runs	Yes
Snubnose darter	Rocky pools and riffles of medium rivers	Somewhat likely
Stargazing minnow	Creeks and small to medium rivers in rocky/gravel runs and riffles. Requires warm clear water.	Somewhat likely
Striped shiner	Creeks and small to medium rivers with swift current, gravel substrate and pools and riffles.	Somewhat likely
Tangerine darter	Deep riffles and runs with large rubble in headwater tributaries	Somewhat likely
Tennessee dace	Pools of spring fed headwaters	Unlikely

Common Name	Habitat Requirement[1]	Suitable Habitat Present
Whitetail shiner	Riffles and pools in headwaters, creeks and small rivers with clear water and gravel substrate	Unlikely
Gastropod		
Cohutta slitmouth	Terrestrial	Somewhat likely
Knotty elimia	Freshwater, limited to the Cumberland River drainage	Unlikely
Ornate rocksnail	Freshwater, does not adapt to dam tail water situations	Unlikely
Toothy coil	Terrestrial	Somewhat likely
Mussel		
Coosa moccasinshell	Found in sand and gravel of clear streams and small rivers with moderate to strong flow	Somewhat likely
Cumberland bean	Shallow riffle and shoal areas of fast moving rivers with gravel substrate	Somewhat likely, historic
Cumberland monkeyface	Riffle and shoal areas of headwater streams and bid rivers. Requires clean fast flowing water	Extirpated unlikely
Dromedary pearlymussel[2]	Riffles at sand and gravel shoals of moderate current rivers. In Tennessee, it is also found in deeper slower moving water.	Extirpated unlikely
Fanshell*	Medium to large streams, sometimes found in rivers with gravel substrate and strong current	Yes
Mountain creekshell	Most often encountered in small headwater creeks and streams in gravel and sand substrate.	Unlikely
Orange-foot pimpleback[2]	Riffles and shoals in medium to large rivers	Yes
Oyster mussel	Sand/Gravel substrates in swift currents of large creeks and rivers. Sometimes associated with *Justica americana* beds.	Likely
Pink mucket[2]	Large river species associated with swift currents. May be able to reproduce in impoundments with flowing water.	Somewhat likely
Pyramid pigtoe[2]	Large rivers in shallow riffles and shoals. May persist in below dams if substantial currents from power releases are present	Somewhat likely
Rough pigtoe[2]	Medium to large rivers in sand/gravel/cobble shoals. Occasionally found in flats and muddy sand	Yes
Sheepnose[2]	Generally found in deep water mud/sand/gravel bottoms in large rivers with swift currents. Know to occur in upper Chickamauga reservoir below Watts Bar Dam.	Yes
Shiny pigtoe pearlymussel[2]	Shoals and riffles of small to medium rivers. Does not tolerate deep water or reservoirs.	Historical, Likely

Common Name	Habitat Requirement[1]	Suitable Habitat Present
Slabside pearlymussel	Shallow riffle systems of creeks to large rivers with moderate current	Historical, somewhat likely
Tennessee clubshell[2]	Creeks and rivers in shallow riffles and shoals composed of gravel or sand. Occasionally found in deep water habitat south or Watts Bar Dam	Historical, somewhat likely
Tuberculed blossom pearlymussel	Shallow riffles and shoals with sand/gravel substrate in creeks and medium rivers	Extirpated, unlikely

[1] NatureServe 2016

[2] Records within reservoir

For information on aquatic species and potential impacts of the draft RLMP, see Volume I, Section 3.6.

2.2.6 Water Quality

TVA has improved tailwater water quality below many of its hydroelectric facilities. This has been accomplished by the establishment of the Reservoir Releases Improvement Program, which began officially in 1991 when the TVA Board approved a five-year plan to improve water releases from 16 dams by maintaining minimum flows and re-aeration of dam discharges. Implementing minimum flows was accomplished via turbine pulses, and dissolved oxygen levels increased in a variety of ways (e.g., turbine venting, oxygen injection, and weir dams) (Higgins and Brock 1999). These techniques helped to mimic more natural riverine conditions in TVA tailwaters. The Reservoir Releases Improvement Program included daily scheduling at the Chickamauga Reservoir to meet minimum flows. Sufficient water, reservoir storage, and operational flexibility exist at this reservoir to maintain flows by appropriately scheduling normal releases. The cost of this approach is minimal, generally involving the incremental value of power at different hours or days.

Chickamauga Reservoir has an average hydraulic residence time of 8 days and a mean depth of 17.7 feet. This residence time is relatively short for large reservoirs and the mean depth is moderate. The most recent ratings for dissolved oxygen, chlorophyll, and sediment for Chickamauga Reservoir from TVA's Reservoir Ecological Health Ratings program are presented in Table 2-12.

Table 2-12. Ecological Health Indicators at Chickamauga Reservoir – 2011

Monitoring location	Dissolved Oxygen	Chlorophyll	Sediment
Forebay	Good	Poor	Fair
Mid-reservoir	Good	Poor	Fair
Hiwassee River embayment	Good	Good	Fair

Source: TVA 2016b.

Dissolved oxygen is rated as good at monitoring locations in Chickamauga. During low flow periods, dissolved oxygen conditions in deeper waters near the bottom into a fair concentration range. Low dissolved oxygen concentrations (less than 2 milligrams per liter) have briefly been observed at the forebay (i.e., the deepest part of the reservoir upstream of the dam) in limited areas. Chlorophyll has been rated as poor at the forebay and mid-reservoir locations, but good at the Hiwassee location. TVA has found that ratings fluctuate between good, fair and poor at each location in response to flow conditions, but also that annual average concentrations indicate a trend of increasing levels at the forebay and mid-reservoir locations. Increased chlorophyll levels indicate a decrease in reservoir ecological health.

TVA monitoring determined that sediment quality at all monitoring locations was rated as fair. Polychlorinated biphenyls were detected at each location and arsenic concentrations were slightly higher than expected background levels at the forebay and mid-reservoir. Elevated concentrations of polychlorinated biphenyls, chlordane and selected metals (generally zinc and copper), have been detected in sediment samples from the forebay and Hiwassee embayment monitoring locations in some previous years. Arsenic also was above background levels in samples collected at the forebay in 2001. These metals (arsenic, copper and zinc) occur naturally in soil, and their concentrations in sediment deposited in the reservoir are generally near (slightly above or below) suggested background concentrations.

TDEC establishes water quality standards for individual waterbodies by identifying the most stringent criteria for each assigned use and considering the antidegradation status. The seven designated uses for the waterways of the State are defined in Rules of Tennessee Department of Environment and Conservation, Chapter 0400-40-04 and include: domestic water supply, industrial supply, fish and aquatic life, trout stream, naturally reproducing trout stream, livestock watering and wildlife, and irrigation. Waterbodies in Tennessee that do not fully support their designated uses based on a review of water quality data and information are considered to be impaired and included in the 303(d) list.

The Tennessee River within Chickamauga Reservoir has been designated by TDEC has having all seven designated uses. The Hiwassee River embayment of Chickamauga Reservoir has been is listed on the 303(d) list as impaired for mercury and E. coli due to atmospheric deposition, industrial point source, and an undetermined source (TDEC 2016).

While water supply intakes and waste water discharges are regulated by the states under the National Pollutant Discharge Elimination System, TVA permits the actual intake and outfall structures under Section 26a of the TVA Act. The most recent state permit/water withdrawal registration data for water supply withdrawals and waste water discharges directly from or to the reservoirs is provided in Table 2-13. This information does not include withdrawals or discharges in the watersheds.

Table 2-13. Direct Reservoir Average Daily Water Supply Withdrawals and Wastewater Discharges – 2016

2010 Water Withdrawal Volume (MGD)			2010 Wastewater Discharge Volume (MGD)		
Municipal	**Industrial**	**Thermo-electric**	**Municipal**	**Industrial**	**Thermo-electric**
22.97	65.76	1591.37	11.20	63.46	1725.87

Notes: Municipal water withdrawal data includes 10.89 MGD in the impounded portion of Hiwassee River.
All of the industrial water withdrawals are in the impounded portion of Hiwassee River.
Municipal wastewater discharge data includes 9.08 MGD in the impounded portion of Hiwassee River.
All of the industrial wastewater discharges are in the impounded portion of Hiwassee River.
MGD = million gallons per day.

Source: Pers. Comm., Gary Springston, TVA, August 2016

For information on water quality and potential impacts of the draft RLMP, see Volume I, Section 3.8.

2.2.7 Wetlands

Wetlands are transitional ecosystems between terrestrial and aquatic communities, where saturation with water is the dominant factor in determining the types of plants and animals present. Wetlands are ecologically important because of their beneficial effect on water quality, their moderation of flow regimes by retaining and gradually releasing water, their value as wildlife habitat, and as areas of botanical diversity. Wetlands exist within and adjacent to TVA reservoirs and are influenced by surface water and groundwater connections to the water levels in these reservoirs. The presence of wetlands immediately on or adjacent to TVA reservoirs is related to the land use characteristics and development status of the shoreline. Lands

supporting more intense shoreline development are typically noted as having a decrease in wetland features.

Vegetated wetlands occur with greater frequency and size along the mainstem reservoirs and tailwaters, such as Chickamauga, than along the tributary reservoirs and tailwaters. This is due in part to the larger-sized watersheds of mainstem reservoirs resulting in a greater volume of water; greater predictability of the annual hydrologic regime; shoreline and drawdown zone topography (wider and flatter floodplains, riparian zones, and drawdown zones and large areas of shallow water); and larger sections of relatively still, shallow-water areas. Wetlands tend to be smaller and do not occur as frequently on tributary reservoirs because of the relatively steep drawdown zones, the rolling to steep topography of adjacent lands, shoreline disturbance caused by wave action, and the lower predictability and shorter duration of summer pool levels. Within mainstem reservoirs, wetlands occur on flats between summer and winter pool elevations, on islands, along reservoir shorelines, in dewatering areas, in floodplains, on river terraces, along connecting rivers and streams, around springs and seeps, in natural depressions, in areas dammed by beaver, in and around constructed reservoirs and ponds (diked and/or excavated), and in additional areas that are isolated from other surface waters.

Emergent wetlands typically occur in a narrow elevation zone centered on the summer pool elevation and contain water for much of the growing season. Vegetation typically includes cattail, bulrush, arrowhead, and water plantain. Scrub-shrub wetlands are typically associated with reservoir shorelines and coves and are often transition zones between emergent and forested wetlands. The vegetation can include hardwood trees less than 15 feet tall, but are dominated by shrubs such as silky dogwood, red osier dogwood, buttonbush, alder, willow, and elderberry. Forested wetlands occur on lower-lying, undisturbed areas and along tributary streams on power generation sites. These areas are dominated by flood tolerant hardwood species such as oak, maple, and ash.

The information presented in this document is derived from the National Wetland Inventory (NWI) database and supplemented with previous on-the-ground surveys done by TVA, including for the SMI EIS. Field surveys were not performed for this RLMP to gather more up-to-date information regarding the types and locations of wetlands within the Chickamauga Reservoir. The most abundant wetland types within the Chickamauga Reservoir besides open water are scrub-shrub and forested (Table 2-14).

Table 2-14. Wetland Types within the Chickamauga Reservoir

Wetland Type	Acres
Emergent	0.03
Forested	0.21
Scrub Shrub	0.08
Open Water	104.8
Total	**105.1**

Source: USFWS2016b

Some of the wetland areas within the reservoir are present in local, state, and federally managed areas including wildlife refuges, wildlife management areas, national forests, parks, and recreation areas; and TVA-designated sites, including small wild areas, habitat protection areas, and ecological study areas (Section 2.2.11).

For information on wetlands and the potential impacts of the draft RLMP, see Volume I, Section 3.9.

2.2.8 Floodplains

The area encompassed by the RLMP extends from the lower limit of TVA's property, just below the Chickamauga Dam at approximately Tennessee River Mile (TRM) 470.6, upstream to TRM 529.9 at Watts Bar Dam. Chickamauga Dam is located at TRM 471.00. The 100-year floodplain is the area that would be inundated by the 100-year flood (base flood).

The 100-year flood elevations on the Tennessee River vary between 659.8 feet msl at TRM 470.5 and 659.9 feet msl at the downstream face of Chickamauga Dam at TRM 471.0. The 500-year flood elevations on the Tennessee River vary between 666.2 feet msl at TRM 470.5 and 666.3 msl at the downstream face of Chickamauga Dam at TRM 471.0.

In Chickamauga Reservoir, the 100-year flood elevations for the Tennessee River vary from 686.0 feet msl at the Chickamauga Dam at TRM 471.0 to elevation 698.0 fee1t msl at TRM 529.9 just below Watts Bar Dam. The 500-year flood elevations vary from 689.0 feet msl at TRM 471.0 to 701.8 feet msl at TRM 529.9.

Tabulations of the 100- and 500-year flood elevations are included in Volume I, Appendix D. For information on the potential impacts of the draft RLMP on floodplains, see Volume I, Section 3.10.

2.2.9 Air Quality

In accordance with the Clean Air Act Amendments of 1990, all counties that include parts of the Chickamauga Reservoir are designated with respect to compliance, or degree of noncompliance, with the National Ambient Air Quality Standards (NAAQS). The NAAQS have been established to protect the public health and welfare with respect to six pollutants: particulate matter, sulfur dioxide, carbon monoxide, ozone, nitrogen dioxide, and lead. An area with air quality better than the NAAQS is designated as “attainment;” an area with air quality worse than the NAAQS is designated as “non-attainment.” Bradley, Hamilton, Meigs, McMinn and Rhea counties are considered in attainment for all NAAQS. The Cohutta Wilderness Area is a designated prevention of significant deterioration (PSD) Class I air quality area approximately 17 miles from the Chickamauga Reservoir and is afforded special protection. General information about air emissions and climate change are identified in Volume I.

Sources of air emissions within lands along the Chickamauga Reservoir include industrial development, public works projects, developed recreation sites, motorized watercraft (motor boats, jet skis), and other vehicle traffic. Lands that would be allocated to Zone 5 (Industrial) have the greatest potential to support uses that produce higher levels of air emissions. Major sources of air emissions within Zone 5 include industrial and light manufacturing facilities, barges, trucks and personal vehicles, and barge terminals and operations.

Air emissions generated within the Chickamauga Reservoir vary with type of activity/development. Currently, air emissions from uses on TVA lands on the Chickamauga Reservoir are low. Future projects that have the potential to affect ambient air quality would be planned in detail to minimize air emission impacts and would comply with Clean Air Act regulations.

For information on air quality and the potential impacts of the draft RLMP, see Volume I, Section 3.11.

2.2.10 Cultural and Historic Resources

Cultural resources include prehistoric and historic archaeological sites, districts, buildings, structures, and objects, as well as locations of important historic events that lack material evidence of those events. Cultural resources that are listed, or considered eligible for listing, on the National Register of Historic Places (NRHP) are called historic properties. To be considered an historic property, a cultural resource must possess both integrity and significance. A historic property’s integrity is based on its location, design, setting, materials, workmanship, feeling, and

association. The significance is established when historic properties meet at least one of the following criteria: (a) are associated with important historical events or are associated with the lives of significant historic persons; (b) embody distinctive characteristics of a type, period, or method of construction; (c) represent the work of a master, or have high artistic value; or (d) have yielded or may yield information important in history or prehistory (36 CFR Part 60.4).

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effects of their proposed undertakings on historic properties and provide the Advisory Council on Historic Preservation an opportunity to comment on those effects. TVA determined that draft RLMP (Alternative B) is an “undertaking” as defined by the regulations under NHPA. Once an action is determined to be an undertaking, the regulations require agencies to consider whether the proposed activity has the potential to impact historic properties. If the undertaking is such an activity, then the agency must follow the following steps: (1) involve the appropriate consulting parties; (2) define the area of potential effects (APE); (3) identify historic properties in the APE; (4) evaluate possible effects of the undertaking on historic properties in the APE; and (5) resolve adverse effects (36 CFR § 800.4. through 800.13.). An APE is defined as the “geographic area or areas within which the undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR § 800.16.). Concerning cultural resources, the APE is taken as the affected environment for purposes of this EIS. TVA defined the APE to be the approximately 3609.6-acre area where TVA is proposing in its draft RLMP (Alternative B) to change the current Zone allocations (Alternative A).

Section 106 of the NHPA requires federal agencies to consult with the respective State Historic Preservation Officer (SHPO) and Indian tribes when proposed federal actions could affect historic and cultural resources, including archaeological resources, which are also protected under the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act, in addition to the NHPA.

2.2.10.1 Archaeological Resources

The Chickamauga Reservoir region has been an area of human occupation for the last 13,500 years. This includes five broad cultural periods: Paleo-Indian (>9,200 BC), Archaic (9,200-1,000 BC), Woodland (1,000 BC-AD 900), Mississippian (AD 900-1,500), and Historic (AD 1,500-present). These divisions are based on stylistic changes in artifact types and technological and cultural adaptations. Prehistoric land use and settlement patterns vary during

each period, but short- and long-term habitation sites are generally located on flood plains and alluvial terraces along rivers and tributaries. Specialized campsites tend to be located on older alluvial terraces and in the uplands. By 1,500 AD, several historic Indian tribes occupied the region.

Early European settlement came by way of the valley from Virginia and through the Cumberland Gap. After the American Revolution, the upper Tennessee Valley was opened for settlement, with Knoxville becoming a major town by the 1790s. The Cherokee came to occupy the lower region, including southeastern Tennessee, north Georgia, and north Alabama, to the exclusion of the other historic period groups by the mid-18th century. The period from 1790 to 1835 was one of relative coexistence between the Cherokee and the continuing influx of settlers. Settlement gradually advanced down the Valley from Knoxville. The treaty between the Cherokee Nation and U.S. government known as the “Hiwassee Purchase” opened up all the former Cherokee land north of the Hiwassee River for settlement in 1819. Settlement grew along Indian trading posts within the Bradley County area. Ross’s Land in Hamilton County became a bustling trading center. As demands for more settlement land grew so did demands for Cherokee removal. In 1836 the United States Senate ratified the Treaty of New Echota and in 1838 removal, known as the “Trail of Tears” began, which removed approximately 2,500 Cherokees from the lower valley of East Tennessee (McDonald et al. 1986). Sections of the Trail of Tears cross TVA reservoir lands on Chickamauga Reservoir, including on Parcel 295 where the Cherokee Memorial Park has been established as a national historic site.

The economy of the region was based on agriculture; with the Tennessee River network its transportation artery. The coming of the railroad strengthened the ties of the lower valley with the South. It provided an alternative transportation route that previously was impeded by the hazards of river transportation through the treacherous river gorge (now Nickajack Reservoir) below Chattanooga. Major Civil War engagements were fought just west of the APE during the Battle of Chickamauga, according to the Official Military Atlas of the Civil War (Davis et al. 1983).

After the Civil War, many southern cities sought to invest in industrialization; Chattanooga was no exception. At the end of the 19th century, Chattanooga's growth from manufacturing drew many people from the rural neighboring areas of the Valley. By 1925, industrialization and urbanization gave Hamilton County the highest per capita income in the state. The area north and east of Chattanooga, including the Chickamauga counties of Bradley, McMinn, Rhea, and

Meigs, remained primarily agricultural. Most industrial development was attracted to the centers of Chattanooga and Knoxville (McDonald et al. 1986). Archaeological resources associated with the antebellum and post-antebellum periods include remains associated with individual farmsteads or larger scale plantations and civic, ceremonial, and industrial sites.

The earliest formal archaeological investigations in the region began long prior to the impoundment of Chickamauga Reservoir and were undertaken by Cyrus Thomas (1894), Clarence B. Moore (1915), and Mark Harrington (1922). These early investigations were primarily concerned with prehistoric monumental architecture. During the years leading up to the construction of Chickamauga Dam, TVA, utilizing labor from the Works Projects Administration, conducted large-scale archaeological excavations in Chickamauga Basin (Lewis and Kneberg 1995). The Chickamauga project was the first of these salvage archaeological projects that was solely run through the University of Tennessee. These excavations generally focused on large village sites and civic/ceremonial centers. The Chickamauga Basin excavations at sites such as Candy Creek Site (40BY14), Hiwassee Island (40MG31), Dallas (40HA1), Ledford Island (40BY13) was integral in the reconstruction of the cultural chronology within the region.

In recent decades, TVA fee-owned land has been subject to both systematic and opportunistic archaeological surveys for TVA undertakings and land planning actions. The largest of these archaeological investigations in the Chickamauga Reservoir was approximately 1,273 acres and approximately 121 miles of shorelines (Smith 1988; Smith et al. 1990). However, only 8 percent of Chickamauga fee-owned land has been subject to systematic archaeological survey. Thus, archaeological surveys have not been conducted on all of the lands involved in this land planning process. Moreover, many of the previously reported archaeological sites have not been assessed for their NRHP eligibility. Of the 3609.6 acres of lands that TVA proposes to change land use allocations under the draft RLMP (Alternative B), these limited archaeological surveys resulted in the identification of 207 archaeological sites.

2.2.10.2 Historic Structures

The acquisition of land for Chickamauga Reservoir resulted in the removal of many structures and other man-made features. The few structures that remain represent all historical periods including individual farmsteads or larger scale plantations, civic or religious sites such as churches, cemeteries or schools, and industrial sites such as mills. In addition, structures associated with the inception of TVA may have historic significance such as the Chickamauga

Dam. TVA is currently in the process of nominating Chickamauga Dam and its associated facilities to the NRHP.

The presence of other historic structures on Chickamauga Reservoir cannot be ruled out until a historic structure inventory has been conducted as part of a project-specific environmental review (all project occurring on TVA land receive such a review as part of the NEPA and Section 106 processes). Furthermore, many historic structures remain on adjacent non-TVA land that may be indirectly impacted by activities on TVA land.

2.2.11 Natural Areas and Ecologically Significant Sites

Natural areas include managed areas, ecologically significant sites, and Nationwide Rivers Inventory (NRI) streams. Managed areas include lands held in public ownership that are managed by an entity (e.g., TVA, NPS, USFS, state of Tennessee, Hamilton County) to protect and maintain certain ecological and/or recreational features. A management plan or similar document defines what types of activities are compatible with the intended use of the managed area. Ecologically significant sites are tracts of privately owned land either that are recognized by resource biologists as having significant environmental resources or identified tracts on TVA lands that are ecologically significant, but not specifically managed by TVA's Natural Areas Program. NRI streams are free-flowing segments of rivers recognized by the NPS as possessing outstandingly remarkable natural or cultural values that may potentially qualify them as part of the National Wild and Scenic Rivers System.

The TVA Natural Heritage database indicates that there are 41 natural areas on or within TVA parcels along Chickamauga Reservoir. The TVA Natural Areas Program manages 16 of the 41 natural areas. An additional 30 natural areas lie within 3 miles of Chickamauga Reservoir. The natural areas along Chickamauga Reservoir include Tennessee Wildlife Resources Agency (TWRA) lands and city, county, and state parks. For more information on managed areas and sensitive ecological sites, see Volume I, Section 3.13 and Appendix D.

2.2.12 Aesthetics and Visual Resources

With the exception of some rock outcrop and bluff formations, Chickamauga's visual resources are not unusually unique on a state, regional, or national level. The upper riverine portions are separated from back-lying farmlands by strips of trees and miles of high clay banks that are continually being eroded by wave action. Occasionally, these shorelines are interrupted by creek embayments with dense aquatic plant growth, presenting a low marsh like character to the landscape. Downstream, the river portions of the reservoir become broadened by numerous

emergent wetland embayments, providing a scenic middle ground to divide the lake user from the mainland.

The confluence of the Hiwassee River with the Tennessee River is home to the Hiwassee State Wildlife Refuge and is characterized by undeveloped open space around Hiwassee Island where both the Cumberland and Appalachian Mountain ranges are visible. The water quality is noticeably clearer at this point, and there is an absence of manmade structures along the surrounding shoreline. The majority of creek embayments along the Hiwassee River still exhibit impressive scenic characteristics despite some light to moderate surrounding development.

The upper reaches of the Hiwassee River are characterized by industrial development with commercial river and rail access. TVA's Sequoyah Nuclear Plant is the most noticeable landmark within the reservoir bounds. Its cooling towers can be seen from numerous vantage points as far away as Lookout and Raccoon mountains.

Five major creek embayments downstream of the Hiwassee River contain a significant number of TVA tracts of land situated between numerous concentrations of primary and secondary homes. Larger, more expensive residences are found closer to Chattanooga, generally along the main channel or in small coves adjacent to the main lake.

The Patten Island-Harrison Bay area is possibly of the highest scenic value to the greatest concentration of lake users. While the island cluster is of similar character to that of the Hiwassee Island area, it differs in that it is almost totally surrounded by development. Marinas, state and local parks, residences, major highways, and public access sites surround the island group that remains more or less natural in appearance. This area is a favorite weekend anchorage for boaters and appears to be the upstream limit of heavy boating activity. Chickamauga Dam Reservation and the lake area adjacent to the dam receive the heaviest day use by recreationists on the reservoir.

2.2.13 Noise

Sources of noise within lands along the Chickamauga Reservoir include those associated with industrial development, developed recreation sites, and uses related to TVA project operations, and various public works projects. Characteristics of noise emissions associated with common land uses are identified in Volume I of the EIS.

Lands that TVA proposes to allocate to Zone 5 (Industrial) have the greatest potential to support uses that produce high levels of noise. The most common measurement of sound and environmental noise is the A-weighted decibel scale (dBA). This is a logarithmic scale that ranges from 0 dBA to about 140 dBA and approximates the range of human hearing. The threshold of human hearing is about 0 dBA; less than 30 dBA is very quiet; 30 to 60 dBA is quiet; 60 to 90 dBA is moderately loud; 90 to 110 dBA is very loud; and 110 to 130 is uncomfortably loud. A 10-decibel increase in sound levels is perceived as a doubling of the loudness. Common sources of noise from industrial uses include heavy trucks; rail and barge operations; and industrial workplaces. Noise emission levels for these sources can range from 85 decibels (dBA) to 100 dBA (USDOI 2008) and are dependent on the distance from the noise source. Lands that would be allocated to Zone 2 (Project Operations) and Zone 6 (Developed Recreation) also have the potential to generate noise, but typically to a lesser degree than industrial development. The primary source of noise from land to be allocated to Zone 2 is the Chickamauga Dam Reservation including the dam and powerhouse, navigation lock and associated barge operations, access roads; boat-launching ramp; and a commercial marina. Noise emission levels for these sources can range from 70 dBA to 100 dBA (USDOI 2008) and are also dependent on the distance from the noise source. The primary source of noise from land allocated to Zone 6 would be commercial marinas and motorized watercraft (e.g., motor boats, jet skis); and road traffic. Noise emission levels for land uses allocated to this zone can range from 40 dBA (very quiet) to 90 dBA (jet ski). Noise levels for motor boats and jet skis may also exhibit short elevated bursts of noise as a result of speed of the watercraft and other operational factors.

Under the draft RLMP (Alternative B), TVA land that would be allocated to Zone 3 (Sensitive Resource Management), Zone 4 (Natural Resource Conservation) and Zone 7 (Shoreline Access) account for the majority (79 percent) of land uses at Chickamauga Reservoir. Such land uses generally do not create noise emissions that would have an effect on the ambient noise environment and reflect a general environment consisting of low noise levels. Approximately 21 percent of land along the reservoir would be allocated to zones that would support land uses with the potential for noise emissions (Zones 2, 5, and 6).

Noise from land uses varies with the type of development and would attenuate with distance from the source and as such, the noise level around the reservoir is relatively low. Any future projects on parcels that have the potential to affect noise emissions would be planned in detail

and may be expected to consist of both water-dependent facilities and other common actions as well as new developments as allowed per each land use zone.

2.2.14 Socioeconomics

2.2.14.1 Population and Economy

The population of the Chickamauga Reservoir area is described in Table 2-15. Hamilton County has the highest population of the six county area with 354,098 persons, which represents an increase of 5.2 percent since 2010. Only Bradley County had a growth rate equal to or greater than Hamilton County, both of which are higher than the state of Tennessee's growth rate over the same period. Hamilton County is the only county within the Chickamauga Reservoir area that is projected to decline in population from 2015 to 2020. Meigs County has the lowest estimated population with 11,830 in 2015; however it also has the highest projected growth rate between 2015 and 2020 at 60.9 percent. Projections through 2020 indicate that all counties with the exception of Hamilton County will continue to have faster population growth rates than the state of Tennessee.

Table 2-15. Population and Percent Growth – Chickamauga Reservoir

Population	County						State
	Bradley	Hamilton	McMinn	Meigs	Polk	Rhea	Tennessee
Population (2020 - Projection)	121,533	344,951	57,155	19,040	22,086	37,665	7,195,375
Population (2015 - Estimate)	104,091	354,098	52,639	11,830	16,773	32,526	6,600,299
Population (2014 - Estimate)	101,004	344,772	52,409	11,694	16,715	32,272	6,451,365
Population (2010)	98,963	336,463	52,266	11,753	16,825	31,809	6,346,105
Projected Growth (2015-2020)	16.9%	-2.6%	8.6%	60.9%	31.7%	15.8%	8.3%
Percent Change (2010-2015)	5.2%	5.2%	0.7%	0.7%	-0.3%	2.3%	3.9%
Percent Change (2010-2014)	2.1%	2.5%	0.3%	-0.5%	-0.7%	1.5%	1.6%

Sources: USCB 2015 and USCB 2010a

The counties in the Chickamauga Reservoir area are decidedly rural in distribution of population. Hamilton and Bradley counties have a lower percentage of rural population than the state of Tennessee, while the remaining counties all have greater than a 60 percent rural population. Both Meigs and Polk counties are considered to be completely rural.

As presented in Table 2-16, from 2010 to 2014, an average of 7 percent of the population was unemployed throughout the area counties. The state of Tennessee during that same period had an unemployment rate of 6 percent. The three largest counties, Bradley, Hamilton, and McMinn

counties have the highest percentage of employment within Management, Business Science, and Arts. In general, median household incomes are similar in all counties and are proportional to the total population within the county. Hamilton County is only county within the area that has a higher median household income than the state.

Table 2-16. Employment and Income, 2010-2014 – Chickamauga Reservoir

Employment and Income	County						State
	Bradley	Hamilton	McMinn	Meigs	Polk	Rhea	Tennessee
Civilian Employed Population 16 Years and Over	43,193	161,007	20,860	3,766	6,343	12,371	2,835,895
Management and Business Science and Arts	29%	37%	27%	18%	24%	25%	34%
Service Occupations	18%	17%	15%	16%	17%	17%	17%
Sales and Office	25%	25%	21%	19%	25%	19%	25%
Natural Resources, Construction, and Maintenance	10%	8%	11%	18%	11%	13%	9%
Production, Transportation and Material Moving	19%	13%	26%	30%	22%	27%	15%
Percent of Population > 16 years Unemployed	7%	6%	6%	9%	7%	7%	6%
Median Household Income	$41,575	$47,880	$39,644	$33,061	$39,434	$37,512	$44,621

Source: USCB 2010b

2.2.14.2 Environmental Justice

EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" formally requires Federal agencies to incorporate Environmental Justice as part of NEPA. Specifically, it directs them to address, as appropriate, any disproportionately high and adverse human health or environmental effects of their actions, programs, or policies on minority and low-income. Although TVA is not one of the agencies subject to this order, TVA routinely considers Environmental Justice impacts as part of the project decision-making process.

The minority population in the Chickamauga Reservoir area is less than one-eighth of the total population (Table 2-17). Hamilton County, the largest county within the area, also contains the highest percentage of minority population at 28.6 percent, which exceeds the states minority population of 25.4 percent. All of the remaining counties have very small minority populations ranging from 4.1 percent in Polk County to 12.7 percent in Bradley County. Every county within the area, except Hamilton County, has a higher percent of the population below the poverty level than the state of Tennessee. The percent of the population below the poverty level ranges from 16.0 percent in Hamilton County to 23.0 percent in Rhea County.

Table 2-17. Minority Population and Poverty, 2010 -2014 – Chickamauga Reservoir

Minority Population and Poverty	County						State
	Bradley	Hamilton	McMinn	Meigs	Polk	Rhea	Tennessee
Total Population	101,004	344,772	52,409	11,694	16,715	32,272	6,451,365
White Alone[1]	92,821	258373	48,498	11,400	16,259	30,485	5,029,109
Black or African American Alone[1]	4,551	68961	2,106	126	30	703	1,082,001
American Indian and Alaska Native Alone[1]	164	639	127	3	104	51	17,656
Asian Alone[1]	993	6617	266	0	28	23	98,441
Native Hawaiian and Other Pacific Islander Alone[1]	184	151	0	0	0	0	3,256
Two or More Races	1,716	5838	1,086	294	256	673	122,662
Hispanic or Latino[2]	5,189	4807	1,616	144	273	1,333	309,828
Percent Minority	12.7%	28.6%	9.9%	4.8%	4.1%	8.6%	25.4%
Percent of Population Below Poverty Level	19.8%	16.0%	18.5%	21.9%	18.9%	23.0%	17.8%

[1] Includes persons reporting only one race
[2] Hispanics may be of any race, so also are included in applicable race categories.

Source: USCB 2010b

2.3 Major Features of Chickamauga Reservoir

2.3.1 Historical Overview of the Chickamauga Region

2.3.1.1 Hiwassee Island

There are over 600 known archaeological sites within or adjacent to the Chickamauga Reservoir. Many are important examples of the previous occupants of this reservoir, but few are as important as Hiwassee Island. Hiwassee Island, the island and archeological site (40MG31), is located approximately 24 miles north/northeast of Chattanooga in Meigs County, Tennessee, at the mouth of the Hiwassee River where it flows into the Tennessee River. The island contains one of the most important Mississippian village complexes in the southern Appalachian region. The island is owned in fee by the TVA and is managed by TWRA as part of the Hiwassee Wildlife Refuge. The boundary of 40MG31 includes an area of approximately 850 acres. The site has been repeatedly explored by antiquarians and archeologists for more than 100 years, who noted the island's many conical mounds and two substructure mounds. The most extensive scientific study of the mounds, made by the University of Tennessee in the 1930s, documented a Late Woodland occupation and a long sequence of Mississippian village occupation and mound construction. The site is significant for several reasons: it contains one of the few large Mississippian village sites that has been scientifically studied in the Lower Tennessee River valley; the 1930s study by the University of Tennessee resulted in the earliest reliable Late Woodland and Mississippian chronology in the region; the findings of that study heavily

influenced subsequent large scale studies in the Watts Bar and Kentucky reservoirs; the site still possesses extensive archeological deposits and will be nominated to the NRHP.

The Hiwassee Island archeological site contains the archetypical Dallas Phase Mississippian mound center. Lewis and Kneberg (1946) defined Dallas Focus based on their findings at Hiwassee Island and other sites in the Chickamauga Basin, and Hiwassee Island furnished the basis for the first separation of the Mississippian into Hiwassee Island (AD 1,000-1,300) and Dallas (AD 1,300-1,500) phases.

As a result of the construction of the Chickamauga Reservoir the site was excavated from 1937 to 1939 with labor provided by the Civil Works Administration and the Works Progress Administration. Under the direction of Thomas M.N. Lewis and Madeline Kneberg of the University of Tennessee these excavations explored four kinds of areas: five conical burial mounds; the one remaining substructure mound; an extensive village deposit; and four small middens. The village deposit covered a large area near the upstream tip of the island, around and underneath the mounds. The substructure mound was the only remaining mound of that type visible on the island at the time. The four excavated small midden areas were a sample of the 126 midden areas noted on the island.

One of the most interesting results of the project was the discovery of the construction sequence of the substructure mound. The excavation showed that the public construction had begun even before mound construction began, and in the same location as later community structures. The village midden that covered most of this end of the island was also present underneath the substructure mound. It contained predominantly Hiwassee Island Phase ceramics, which indicates that a Hiwassee Island occupation had begun before construction of the mound. The first set of three buildings was constructed on this surface and these suggested community buildings that were part of a planned village layout. These three houses were rebuilt at least once, before fill was imported and a new surface built up over it. The structures placed on this level were in the same locations, and oriented the same manner, as the original structures. This pattern was followed through all levels of the mound. In some levels there was evidence of a palisade around one of the houses, and in most levels one house was larger than the other. Beginning with Level G, some of the houses had raised earthen “porches” in front and in some levels one house was surrounded by a palisade defining a courtyard. The excavation also documented a transition from trench wall construction to single post construction, and from Hiwassee Island phase (limestone tempered) to Dallas Phase (shell tempered) ceramics. In

most cases successive mound levels were built using village midden as fill. This established that the village and substructure mound accumulated gradually from the Late Woodland through the late Mississippian periods. This meticulous reconstruction of the sequence of occupation and the excavation methods had major influence upon the development of archaeology as a profession in the southeastern United States.

2.3.1.2 Ledford Island

Although not as well-known as Hiwassee Island, Ledford Island (40BY13) is a very significant example of the late prehistoric Mouse Creek phase (AD 1,450 – 1,600). Found within the Hiwassee River, this site was also excavated as a result of the construction of the Chickamauga Reservoir. The Ledford Island site was a nucleated settlement containing at least 20 structures and 468 burials. The settlement was palisaded and had a depressed central plaza which was kept clean of artifacts and debris (Sullivan 1995). A very large structure was situated on the north side of the plaza. In the center of the plaza was a large postmold that still contained the remains of a post, shimmed in place by several stones. A large cluster of burials (ca. 90 individuals) was on the northeastern side of the plaza and a smaller burial group (25 individuals) was on the southwestern side. Over 150,000 pottery sherds and 5,000 artifacts were recovered during the University of Tennessee excavations (May 1938 to April 1939). This site will also be nominated to the NRHP.

2.3.2 Natural Resource Management

Through implementation of the NRP, TVA's biological resource management programs focus on protecting and enhancing the biological resources of the Tennessee Valley. This will be accomplished through the continued evaluation of biological resources, which will allow TVA to prioritize and then preserve sensitive resources (e.g., threatened and endangered species) and unique resources (e.g., old growth bottomland hardwood stands), as well as conserve renewable resources (e.g., forests and native warm season grasses) in a sustainable manner to support diverse habitats for wildlife populations.

The NRP programs will promote environmentally sustainable recreational use on TVA-managed lands such as these along Chickamauga Reservoir. Dispersed recreation, such as camping, bank fishing, and hiking, can create both positive and negative impacts on natural resources. TVA will take a proactive approach to reducing the negative impacts such as habitat or species damage while providing users with sustained, high-quality recreational experiences.

Finally, partnerships and cooperative projects with state and other federal agencies and nongovernmental organizations will be developed in an effort to support the current biological resources management efforts. It is critical for regional stakeholders to collaborate on protection, enhancement and conservation efforts.

2.3.3 Natural Areas

Natural areas include ecologically significant sites, lands designated for a particular resource management objective, and/or lands that contain sensitive biological, cultural, or scenic resources. In 1983, in recognition of the importance of unique natural resources, TVA established policy for the identification and protection of areas or features of natural and scenic significance. This policy provided for direct and cooperative actions by TVA in identifying significant natural and scenic areas of the region and in establishing protection for these resources. In order to implement this policy, a natural area identification and protection effort was established.

TVA natural areas are categorized as small wild areas (SWAs), ecological study areas, habitat protection areas (HPAs), and wildlife observation areas (WOAs). SWAs are sites with exceptional natural, scenic, or aesthetic qualities that are suitable for low-impact public use, such as foot trails and backcountry campsites. Ecological study areas are sites suitable for ecological research or environmental education. These study areas contain plant or animal populations of scientific interest and/or are located near an educational institution that would utilize and manage the area. HPAs are established to protect rare plants, animals, exemplary biological communities, or unique geological features. WOAs are sites that support concentrations of viewable wildlife such as shorebirds, songbirds, and waterfowl (TVA 2011).

2.4 The Future Management of Reservoir Lands

Varying types of land management or conservation techniques coupled with development could occur along Chickamauga Reservoir. The implementation of the NRP would drive the types of programs conducted on TVA lands set aside due to natural or sensitive resources. Business opportunity, overall economy, local incentives, and community planning practices are factors that could contribute to the types of industry locating or expanding along the reservoir. Recreation demand is driven by population levels, recreation participation rates, changing preferences for different types of recreation, and innovations in recreation equipment. Lands set aside for residential shoreline access are based on the types of property rights conveyed by

TVA upon sale of the property. The TVA lands managed by other federal, state, or local agencies would most likely continue to do so in a similar manner.

CHAPTER 3. LAND PLANNING PROCESS

3.1 Process for Planning Land

The reservoir land management planning process involves allocation of TVA fee-owned land to seven defined land use zones. The term “land use zone” refers to a descriptive set of criteria given to distinct areas of land based on location, features, and characteristics. The land use zone definitions listed in Table 3-1 are identical to those listed in the NRP. The definition of a land use zone provides a clear statement of how TVA will manage public land, and allocation of a parcel to a particular land use zone identifies that land for specific uses. Implementation of an RLMP minimizes conflicting land uses and makes it easier to handle requests for use of public land.

This draft RLMP was developed by a team of land managers and technical experts from TVA, knowledgeable about the reservoir and its resources. The planning team proposed land use decisions by integrating public needs, environmental conditions, economic benefits, state and federal policies, and the original congressional intent of the Chickamauga Reservoir project. The process includes information from resource data, computer analysis, the public, other agencies, and knowledgeable TVA staff. This draft RLMP would be consistent with the strategic direction of the NRP and the objections of the CVLP. Furthermore, the categorization and management of TVA-owned shoreline access land along Chickamauga Reservoir tiers from the SMI EIS.

The planning process is completed once TVA conducts an environmental review of the draft RLMP as well as reasonable alternatives, in compliance with NEPA. This process allows the public and intergovernmental partners to review TVA’s proposed allocations and provide input.

Table 3-1. Land Use Zone Definitions

Zone	Definition
Zone 1 Non-TVA Shoreland	Shoreland that TVA does not own in fee. This land may be privately owned or owned by a governmental entity other than TVA. Uses of this non-TVA land may include residential, industrial, commercial, and/or agricultural. In many instances, TVA may have purchased the right to flood and/or limit structures on this non-TVA land (i.e., flowage easement). TVA’s permitting authority under Section 26a of the TVA Act applies to construction of structures on non-TVA shoreland. Non-TVA shoreland allocations are based on deeded rights and, therefore, will not change as a result of the lands planning process. This category is provided to assist in comprehensive evaluation of potential environmental impacts of TVA’s allocation decision.

Zone	Definition
Zone 2 Project Operations	Land currently used, or planned for future use, for TVA operations and public works projects, including: • Land adjacent to established navigation operations — Locks, lock operations and maintenance facilities, and the navigation work boat dock and bases. • Land used for TVA power projects operations — Generation facilities, switchyards, and transmission facilities and rights-of-way. • Dam reservation land — Areas acquired and managed for the primary purpose of supporting the operation and maintenance of TVA dams and associated infrastructure; secondary uses may also include developed and dispersed recreation, maintenance facilities, miscellaneous TVA field offices, research areas, and visitor centers. • Navigation safety harbors/landings — Areas used for tying off commercial barge tows and recreational boats during adverse weather conditions or equipment malfunctions. • Navigation dayboards and beacons — Areas with structures placed on the shoreline to facilitate navigation. • Public works projects — Includes rights-of-way for public utility infrastructure, such as sewer lines, water lines, transmission lines, and major highway projects.
Zone 3 Sensitive Resource Management	Land managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment. Recreational natural resource activities, such as hunting, wildlife observation, and camping on undeveloped sites, may occur in this zone, but the overriding focus is protecting and enhancing the sensitive resource the site supports. Areas included are: • TVA-designated sites with potentially significant archaeological resources. • TVA public land with sites/structures listed in or eligible for listing in the National Register of Historic Places. • Wetlands — Aquatic bed, emergent, forested, and scrub-shrub wetlands as defined by TVA. • TVA public land under easement, lease, or license to other agencies/individuals for resource protection purposes. • TVA public land fronting land owned by other agencies/individuals for resource protection purposes. • Habitat protection areas — These TVA natural areas are managed to protect populations of species identified as threatened or endangered by the U.S. Fish and Wildlife Service, state-listed species, and any unusual or exemplary biological communities/geological features. • Ecological study areas — These TVA natural areas are designated as suitable for ecological research and environmental education by a recognized authority or agency. They typically contain plant or animal populations of scientific interest or are of interest to an educational institution that would utilize the area. • Small wild areas — These TVA natural areas are managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural, scenic, or aesthetic qualities that can also support dispersed, low-impact types of outdoor recreation. • River corridor with known sensitive resources present — A river

Zone	Definition
	corridor is a segment of a river and the adjacent land along the banks. River corridors often consist of a linear green space of TVA land serving as a buffer to tributary rivers entering a reservoir. These areas will be included in Zone 3 when identified sensitive resources are present. • Significant scenic areas — Areas designated for visual protection because of their unique vistas or particularly scenic qualities. • Champion tree site — Areas designated by TVA as sites that contain the largest known individual tree of its species in that state. The state forestry agency "Champion Tree Program" designates the tree, while TVA designates the area of the sites for those located on TVA public land. • Other sensitive ecological areas — Examples of these areas include heron rookeries, uncommon plant and animal communities, and unique cave or karst formations.
Zone 4 Natural Resource Conservation	Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Areas included are: • TVA public land managed for wildlife or forest management projects. • TVA public land under easement, lease, or license to other agencies for wildlife or forest management purposes. • TVA public land fronting land owned by other agencies for wildlife or forest management purposes. • Dispersed recreation areas maintained for passive, dispersed recreation activities, such as hunting, hiking, bird watching, photography, primitive camping, bank fishing, and picnicking. • Shoreline conservation areas — Narrow riparian strips of vegetation between the water's edge and TVA's back-lying property that are managed for wildlife, water quality, or visual qualities. • Wildlife observation areas — TVA natural areas with unique concentrations of easily observed wildlife that are managed as public wildlife observation areas. • River corridor without known sensitive resources present — A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. River corridors will be included in Zone 4 unless sensitive resources are known to be present (see Zone 3). • Islands where sensitive resources are not known to be present or that support existing development.
Zone 5 Industrial	Land currently used, or planned for future use, for economic development, including businesses in distribution/processing/assembly and manufacturing. Preference will be given for businesses requiring water access. There are two primary types of uses for TVA land allocated for Industrial: (1) access for water supply or structures associated with navigation such as barge terminals, mooring cells, etc., or (2) land-based development potential. Areas included are: • TVA public land under easement, lease, or license to other agencies/individuals/ entities for industrial purposes. • TVA public land fronting land owned by other agencies/individuals/entities for industrial purposes.

Zone	Definition
	In some cases, TVA land allocated to industrial use would be declared surplus and sold at public auction. Types of development that can occur on this land are: • Industry — Manufacturing, fabrication, and distribution/processing/assembly involving chemical, electronics, metalworking, plastics, telecommunications, transportation, and other industries. Industry does not include retail or service-based businesses. • Industrial access — Access to the waterfront by back-lying property owners across TVA property for water intakes, wastewater discharge, or conveyance of commodities (i.e., pipelines, rail, or road). Barge terminals are associated with industrial access corridors. • Barge terminal sites — Public or private facilities used for the transfer, loading, and unloading of commodities between barges and trucks, trains, storage areas, or industrial plants. • Fleeting areas — Sites used by the towing industry to switch barges between tows or barge terminals that have both offshore and onshore facilities. • Minor commercial landing — A temporary or intermittent activity that takes place without permanent improvements to the property. These sites can be used for transferring pulpwood, sand, gravel, and other natural resource commodities between barges and trucks.
Zone 6 Developed Recreation	Land currently used, or planned for future use, for concentrated, active recreational activities that require capital improvement and maintenance of developed infrastructure, including: • TVA public land developed for recreational purposes, such as campgrounds, day use areas, etc. • TVA public land under easement, lease, or license to other agencies/individuals/entities for developed recreational purposes. • TVA public land fronting land owned by other agencies/individuals/entities for developed recreational purposes. Residential use, long-term accommodations, and/or individually owned units are not permitted on land allocated for developed recreation. Types of development that can occur on this land are: • Public recreation — Recreation amenities developed and owned by a public agency that are open to the public. Public recreation areas may have varying levels of development, ranging from a water access site (e.g., launching ramp) to a marina facility. Facilities at public recreation areas could include playgrounds/play structures, picnic facilities, tennis courts, horseshoe areas, play courts, recreation centers, trails, greenways, natural areas, amphitheaters, food concessions (vending, snack bar), access to water for fishing and boating, swimming areas and swimming pools, launching ramps, courtesy piers, canoe access, marina facilities owned by the public entity, parking, and campgrounds. Cabins or other overnight accommodations (other than campgrounds) are only permitted if the public recreation area is operated by a state or state agency as a component of a state park system. • Public recreation areas and facilities are typically owned and operated by the federal, state, county, or local government. However, private entities may operate recreation facilities on public recreation land as concessionaires under agreement with the public entity controlling the

Zone	Definition
	property. The use of the facilities may be offered free or for a fee. Time-forward, public-private partnerships where facilities are owned by private investors will not be approved on public recreation land. All structures and facilities should be owned by the public entity. • Commercial recreation — Recreation amenities that are provided for a fee to the public intending to produce a profit for the private owner/operator. These primarily water-based facilities typically include marinas and affiliated support facilities such as stores, restaurants, campgrounds, and cabins and lodges. Where applicable, TVA will require appropriate compensation for the commercial use of the property.
Zone 7 Shoreline Access	TVA-owned land where Section 26a applications and other land use approvals for residential shoreline alterations are considered in accordance with TVA's Shoreline Management Policy. Types of development/management that may be permitted on this land are: • Residential water use facilities, e.g., docks, piers, launching ramps/driveways, marine railways, boathouses, enclosed storage space, and nonpotable water intakes. • Shoreline access corridors, e.g., pathways, wooden steps, walkways, or mulched paths that can include portable picnic tables and utility lines. • Shoreline stabilization, e.g., bioengineering, riprap, gabions, and retaining walls. • Shoreline vegetation management.

Prior to proposing parcel allocations, the TVA planning team reviewed the characteristics of each parcel (i.e., location and existing conditions). TVA also reviewed deeds of selected tracts previously sold to private entities to identify existing shoreline access rights. In addition, the planning team honored all existing commitments—that is, existing leases, licenses, and easements. No sensitive resources surveys were conducted on committed land. The need for field reviews for uncommitted parcels was determined based on data from the TVA Natural Heritage database. Land with identified sensitive resources was proposed to be placed in Zone 3 (Sensitive Resource Management). The remaining parcels were proposed for allocation based on reservoir planning objectives and public input. Proposed management of each parcel was made by consensus among the TVA planning team. When developing the draft RLMPs, the planning team identified proposed allocations of reservoir parcels to one of seven planning zones using the zone definitions listed above.

In developing draft RLMPs, TVA proposes to allocate lands currently committed to a specific use to a zone compatible with that use unless there is an overriding need to change the use. Some committed land uses are determined by the covenants and provisions of easements, leases, licenses, and sale and transfer agreements. Committed lands include the following: properties where TVA has granted landrights (easements, leases, etc.) for specific uses,

properties where TVA has previously identified resources in need of protection, Project Operations lands (transmission lines, dam reservations, public infrastructure, etc.), and lands fronting wildlife management areas. Possible reasons to change a committed land use would be to prevent or remedy ongoing adverse impacts resulting from the actions of a license or easement holder.

Approximately 9,503.7 acres (59.7 percent) of the TVA land surrounding Chickamauga Reservoir are committed due to existing agreements, TVA operations, or other public infrastructure projects. Agricultural licenses are not considered as committed uses because they are an interim use of TVA land.

Approximately 6,427.8 acres (40.3 percent) of the TVA land surrounding Chickamauga Reservoir are uncommitted. Technical specialists collected field data on many uncommitted parcels to identify areas containing sensitive resources. Representatives from various TVA organizations met to propose how these uncommitted lands should be allocated into the seven planning zones. The location of known and potentially sensitive resources was used in determining the capability and suitability of potential uses for each parcel of land.

3.2 Chickamauga Reservoir Goals and Objectives

The NRP established long-term land planning goals and objectives. While these goals and objectives were established to guide planning decisions across the Valley, these same goals and objectives can be applied when planning specific reservoirs.

Goal

TVA will strive to continue to balance shoreline development, recreational use, sensitive and natural resource management, industrial use and other land uses in a way that maintains the quality of life and other important values across the region.

Objectives

Apply a systematic method of evaluating and identifying the most suitable uses of TVA public lands using resource data, stakeholder input, suitability and capability analyses, and TVA staff input.

- Identify land use zone allocations to optimize public benefit and balance competing demands for the use of public lands.
- Identify land use zone allocations to support TVA's broad regional resource development mission. TVA reservoir properties are managed to provide multiple public benefits, including recreation, conservation, and economic development.
- Provide a clear process by which TVA will respond to requests for use of TVA public land.
- Comply with federal regulations and executive orders.
- Enhance the protection of significant resources, including threatened and endangered species, cultural resources, wetlands, unique habitats, natural areas, water quality, and the visual character of the reservoir.
- Provide a mechanism that allows local, state, and federal infrastructure projects when the use is compatible with the zone allocation.

3.3 Parcel Allocations

TVA's land planning process (Section 3.1) along with the goals and objectives specific to Chickamauga Reservoir (Section 3.2) were used to develop this draft RLMP. Through this process, TVA proposes allocations of each reservoir parcel to one of the seven planning zones as indicated in Table 3-2.

Table 3-2. Summary of Proposed Land Use Allocations for Chickamauga Reservoir Land Management Plan (Alternative B)

Allocation Designation		Number of Parcels	Acres
Zone 2	Project Operations	64	1,220.3
Zone 3	Sensitive Resource Management	41	2,563.6
Zone 4	Natural Resource Conservation	104	8,656.5
Zone 5	Industrial	9	268.1
Zone 6	Developed Recreation	77	1,873.4
Zone 7	Shoreline Access	100	1,479.5
Total		**395**	**16,061.4**

Under the draft RLMP (Alternative B of the EIS), the percent of land acreage on Chickamauga Reservoir that would be allocated to each land use zone is shown on Figure 3-1. A detailed description of each zone and the identification of the land zoned by each category is presented below.

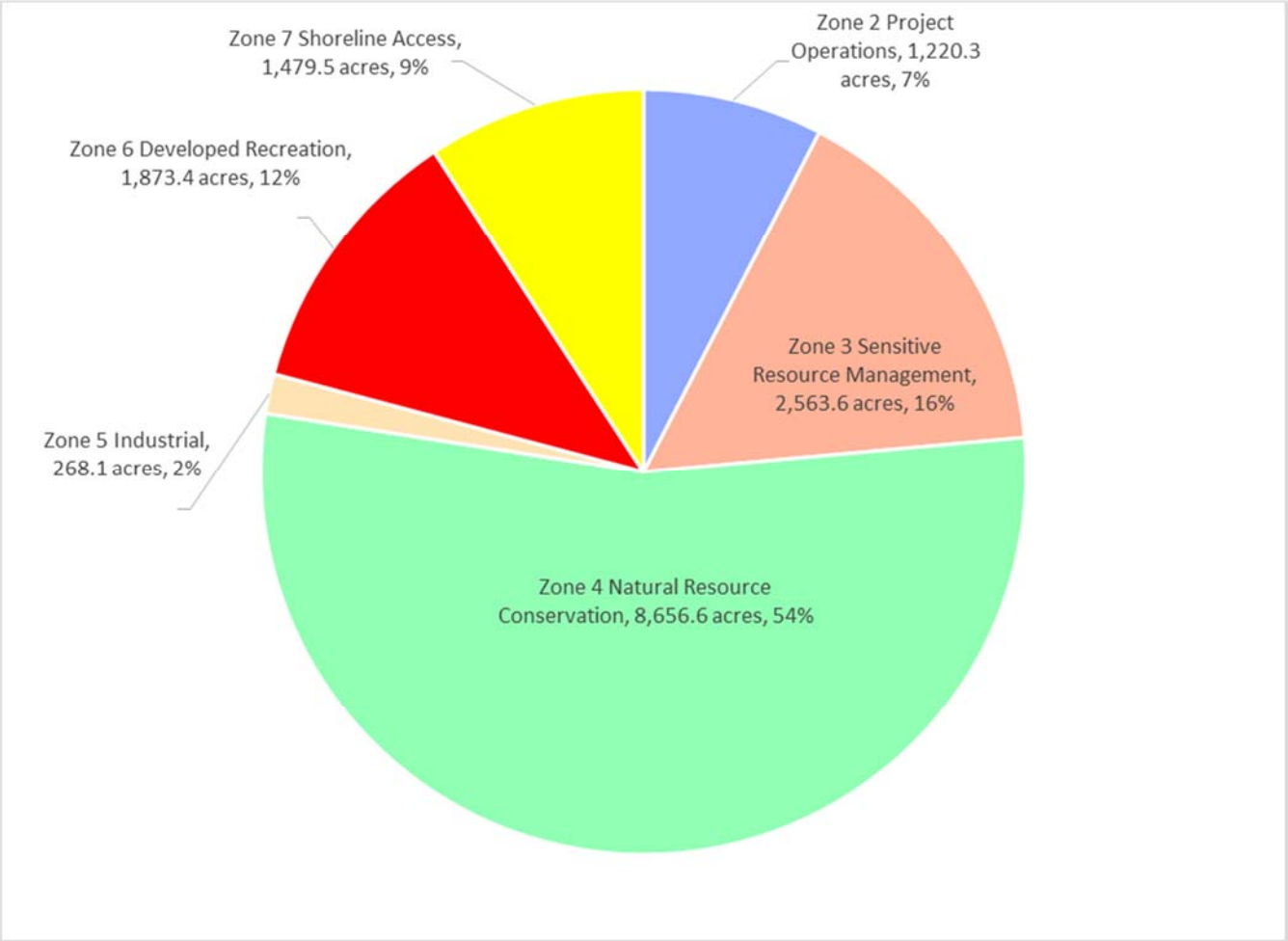


Figure 3-1. Percent of Chickamauga Reservoir Acreage Proposed by Zone

- Zone 2 (Project Operations). Under the draft RLMP (Alternative B), Zone 2 would consist of TVA land that is currently used for TVA operations and public works projects. There would be 1,220.3 acres allocated to Zone 2. The largest parcel to be allocated as Zone 2 is the Chickamauga Dam Reservation which is a historically significant structure. This parcel also contains the navigation lock and associated access roads and mooring cells; roads; highway; boat-launching ramp; and a commercial marina. TVA has agreements with several entities to manage the various uses on this parcel.

- Zone 3 (Sensitive Resource Management). Under the draft RLMP (Alternative B) Zone 3 lands would be managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area, viewscape or natural environment. Approximately 16 percent (2,563.6 acres) of the shoreland on Chickamauga Reservoir would be allocated to Zone 3. The parcels included in this proposed allocation represent areas where high-quality wetland habitat, federally or state-listed species, or cultural and historic resources are present. Many of these parcels are large and managed by the appropriate resource agency.

- Zone 4 (Natural Resource Conservation). Lands proposed to be allocated to Zone 4 in the draft RLMP (Alternative B) are managed for the enhancement of natural resources for human use and appreciation. Management of resources would be the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Over half (54 percent or 8,656.6 acres) of shoreland would be allocated to Zone 4 under this draft plan.

The two largest parcels that would be allocated as Zone 4 are Parcels 214 and 293. Both of these parcels are managed under license to TWRA for the Hiwassee Refuge. Southern pine beetle activity and salvage operations have left only scattered pockets of mature pine timber on this parcel. Some pine regeneration has naturally occurred, and TVA and TWRA have collaborated to conduct forest management on selected areas.

Four other relatively large parcels (greater than 400 acres) would be allocated to Zone 4: (1) Parcel 166 which contains a large area of flooded timber, along with the large sloughs which all contribute to the habitat for waterfowl, shorebirds, mammals and other upland wildlife; (2) Parcel 193 is also a large parcel which is locally known as McKinley Branch and is managed by TVA with numerous partners (e.g., TWRA, Ducks Unlimited, Quail Unlimited, local farmers, Meigs County High School, etc.) to maximize habitat and public use enhancements; (3) Parcel 274 is a large wetland complex in the head of the Candies Creek embayment on the Hiwassee River Tennessee Wildlife Resources Agency is managed by TWRA for wildlife management as a component of the Chickamauga Wildlife Management Area (WMA); and (4) Parcel 319 which

was previously used for forest management research and contains a unique planted hardwood stand.

- Zone 5 (Industrial). Under the draft RLMP (Alternative B), lands allocated to Zone 5 would be managed for economic development including businesses in distribution/processing/assembly and light manufacturing. Less than 2 percent of shoreland (268 acres) around this reservoir would be allocated to Zone 5. Lands proposed for allocation to this zone reflect existing industrial uses.

- Zone 6 (Developed Recreation). Under the draft RLMP (Alternative B), Zone 6 lands are currently used or planned for recreational purposes, such as public launching ramps or parks. For example, Parcel 340 comprises 490 acres, which are under a permanent easement to the state of Tennessee for the management of Harrison Bay State Park. Recreation facilities at Harrison Bay State Park include a campground, trails, picnic areas, a swimming pool, a marina, boat-launching ramps, and a golf course. Parcel 18 is encumbered by a revocable license agreement to Hamilton County, Tennessee for public recreation. This parcel, which is accessible from Gold Point Circle Road, is currently undeveloped; however, some informal recreation use occurs on the area and this site is managed as an adjunct to Hamilton County Park which is located upstream. TVA proposes to allocated 1,873.4 acres (approximately 12 percent) of its land on this reservoir to Zone 6.

- Zone 7 (Shoreline Access). Under the draft RLMP (Alternative B), TVA would allocate 1,479.5 acres (9.2 percent) of the shoreland on Chickamauga Reservoir to Zone 7. Zone 7 lands are TVA-owned lands where Section 26a applications and other land use approvals for private shoreline alterations would be considered. Requests for private shoreline alterations are considered on parcels identified in this zone where such use was previously considered, and/or where the back-lying landowner possesses deeded rights of access, and where the proposed use would not conflict with the interests of the public.

These allocation range results vary somewhat from the estimates for Chickamauga Reservoir contained in the CVLP. The CVLP anticipated that some parcels of land may be better allocated to different land use zones than those initially identified. As discussed in Volume I of the EIS, TVA proposes to update the target allocations of the CVLP based on the eight draft RLMPs and

to recalibrate the CVLP with the periodic updates to the NRP. Table 3–3 compares the draft RLMP and the 2011 CVLP estimates for Chickamauga Reservoir.

Table 3-3. Draft Chickamauga Reservoir Land Management Plan (Alternative B) and 2011 Comprehensive Valleywide Land Plan Comparison

Allocation Designation		Draft Chickamauga Reservoir Land Management Plan	2011 Comprehensive Valleywide Land Plan
Zone 2	Project Operations	7.6%	9%
Zone 3	Sensitive Resource Management	16.0%	34%
Zone 4	Natural Resource Conservation	53.9%	40%
Zone 5	Industrial	1.7%	1%
Zone 6	Developed Recreation	11.7%	7%
Zone 7	Shoreline Access	9.2%	10%

For the following reasons, this draft RLMP allocates a greater number of lands to all land use zones except Zone 3 (Sensitive Resource Management) and Zone 7 (Shoreline Access). A fewer number of acres would be allocated to Zone 3 (Sensitive Resource Management) and Zone 7 (Shoreline Access) than estimated in the 2011 CVLP. These lands would be placed into the more appropriate designations, as discussed below:

Zone 2 (Project Operations)

TVA has a number of transmission lines that cross reservoir property surrounding Chickamauga Reservoir. In addition, there are large number of highways and local roads located on TVA lands with easements to the appropriate managing agency. The 2011 CVLP underestimated the amount of lands that were encumbered with roadways. This was corrected by the draft RLMP, resulting in an increase of lands allocated to Zone 2.

Zone 3 (Sensitive Resource Management)

The greatest change from the 2011 CVLP and this draft RLMP occurs within the Zone 3 designation, in part because TVA obtained additional information on federally and state-listed species and significant cultural resources during this planning effort. During the development of the 2011 CVLP, a greater number of lands were placed in the Zone 3 category based mainly on the premise that habitat for listed species and cultural resources could be present. A review of the TVA Natural Heritage database and the associated land cover during the planning effort showed that fewer listed species are known to be present and the associated habitat was not as prevalent as predicted. Additional cultural resources surveys and historical data were gathered for the planning effort which indicated that cultural resources were not known to be present in

certain areas. As a result of this new information, TVA proposes to allocate fewer lands to the Zone 3 category under the draft RLMP.

Zone 4 (Natural Resource Conservation)
TVA proposes to place a greater number of lands in the Zone 4 category under the draft RLMP. These additional lands were allocated for Zone 3 (Sensitive Resource Management) or Zone 6 (Developed Recreation) in the 2011 CVLP.

Zone 5 (Industrial)
After reviewing the availability of public infrastructure and the presence of known sensitive resources, no additional large tracts of land would be placed in the Zone 5 category under the draft RLMP. However, the 2011 CVLP misinterpreted the back-lying property owners and land use along some marginal strip areas mostly located along the Hiwassee River and these areas were initially allocated into Zone 7 (Shoreline Access). Aligning the marginal strip allocations with the back-lying property owners and current industrial uses resulted in the proposed increase to Zone 5 category.

Zone 6 (Developed Recreation)
The 2011 CVLP underestimated the amount of land previously unencumbered with contractual agreements for public recreation on Chickamauga Reservoir. Specifically, TVA transferred to the state of Tennessee a substantial amount of land for public recreation, and the adjacent TVA land is encumbered with contractual agreements to support this use. Often times, these transferred lands remain in their natural state. In the 2011 CVLP, TVA classified these lands as Zone 4 (Natural Resource Conservation). Allocating the TVA property to Zone 6 would align with the intended use of the transferred property.

Zone 7 (Shoreline Access)
The 2011 CVLP overestimated the amount of former TVA property encumbered with shoreline access rights. In addition, back-lying property owners and land use along some marginal strip areas were incorrectly classified. TVA determined that it would be more appropriate to classify such areas as Zone 5 (Industrial) or Zone 6 (Developed Recreation).

Of the 16,061.4 acres on Chickamauga Reservoir, there are no proposed allocation changes to 10,353.7 acres (64.5 percent); all proposed allocation changes involve 5,707.7 acres (35.5 percent). Of the 5,707.7 acres, TVA would allocate 2,131.1 acres (37.3 percent) to reflect existing land use agreements or commitments. The remaining 3,576.6 acres (62.7 percent)

involve proposed parcel allocations that are not based on existing land use agreements or commitments. See Appendix B for parcel allocation description tables.

3.4 Property Administration

As stewards of public land, TVA uses the RLMP, along with TVA policies and guidelines, to manage resources and to respond to requests for the use of TVA land. Pursuant to the TVA Land Policy, TVA would consider changing a land use designation outside of the normal planning process only for the purpose of water access for industrial or commercial recreational operations on privately owned back-lying land or to implement TVA's SMP.

Additionally, there are a small number of TVA parcels in the Valley that have deeded access rights for shoreline access that are currently utilized for other uses such as commercial recreation and industrial. Should the private back-lying land become residential, a request for a change of allocation of the parcel to Zone 7 (Shoreline Access) would be subject, with the appropriate environmental review, to action by the TVA Board or its designee or to Board-approved policy.

Consistent with the TVA Land Policy, those parcels or portions of parcels that have become fragmented from the reservoir may be declared surplus and sold at public auction. Public works/utility projects, such as easements for pipelines, power or communication wires, roads, or other public infrastructure, proposed on TVA land that would not substantially change the zoned land use or adversely impact sensitive resources would not require an allocation change as long as such projects would be compatible with the use of the allocated zone. Proposed public works/utility projects would be subject to a project-specific environmental review. Any other requests involving a departure from the planned uses would require appropriate approval. Proposals consistent with TVA's policies and the allocated use, and otherwise acceptable to TVA, will be reviewed in accordance with NEPA and must conform to the requirements of other applicable environmental regulations and other legal authorities.

This page intentionally left blank

CHAPTER 4. PARCEL DESCRIPTIONS

This chapter describes the proposed land use determined to be most suitable for each parcel of TVA land as shown on the plan maps (Appendix A, Panels 1 through 12). The parcel descriptions include the acreage rounded to the nearest tenth and the planned land use. Relevant data regarding the proposed land use are provided for each tract and include existing land uses, physical characteristics of the land, presence of existing private water use facilities, and any special considerations related to the future use. All existing private water use facilities with TVA permits are grandfathered, provided they are constructed in accordance with the plans approved by TVA.

Parcel 1 - (801.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is the Chickamauga Dam Reservation and receives heavy public use. Existing facility development includes the dam powerhouse and associated access roads, transmission lines and substations; navigation lock and associated access roads and mooring cells; roads; highway; boat-launching ramp; and a commercial marina. There is also an abundance of informal recreation opportunities with the Tennessee Riverwalk, the North Chickamauga Creek Greenway, and the Chickamauga Dam Day Use Area.

Tennessee State Route (SR) 153 is located on this parcel and runs along the top of Chickamauga Dam. Because this tract contains the Chickamauga Dam Reservation, it is also considered historically significant. Chickamauga Dam is a historically significant structure and eligible for listing on the NRHP.

In addition to Chickamauga Dam, this parcel has a high probability for the presence of cultural resources. Only a small portion has been surveyed and evaluated. Requests for private water use facilities would not be considered.

Table 4-1. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–SW
TVA D-Stage Map Numbers	1, 2, 2–2, 2–3, 2–4, 4
Stream Mile and Bank	TRMs 470.5 to 471.5B
Land Use/Land Cover	Mixture of deciduous forest, maintained lawns, road right-of-way, and water control structures
Known Dispersed Recreation Opportunities	Hiking, walking, jogging, bank fishing
Current Agreements/Commitments	• Permanent easements to Hamilton County, Tennessee, state of Tennessee, U.S. Army Corps of Engineers, and William R. Mintz for roadways • Permanent easements to the city of Chattanooga, Tennessee, and Hamilton County, Tennessee for parks • Permanent easement to Hixson Utility District for water utilities • Permanent easements and revocable licenses to South Central Bell for a telephone lines and utilities • Lease to Erwin Marine Sales, Inc. for commercial recreation • Permanent easement to East Tennessee Natural Gas Company for gas pipeline • Revocable license to Chattanooga Gas Company for a gas pipeline • Revocable licenses to Electric Power Board of Chattanooga for electric utilities • Revocable license to Hamilton County, Tennessee for a roadway • Revocable license to Hixson Utility District for water utilities • Revocable license to the state of Tennessee for fiber optics • Revocable license to the U.S. Army Corps of Engineers for a parking area and special event • Revocable licenses to the U.S. Coast Guard for a boat landing, shelter, and water utilities
Potential Projects	None Identified
Potential Partners	• Erwin Marine Sales, Inc. • Hamilton County, Tennessee • State of Tennessee • U.S. Army Corps of Engineers

Parcel 2 - (226.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This relatively large tract is surrounded on three sides by residential development. The tract is important because it supports a population of large-flowered skullcap (*Scutellaria montana*), a federally listed plant, and a population of American ginseng, a state species of concern. Most of the tract is covered by large, older-aged oak-hickory forest with some of the large trees succumbing to age, creating natural openings, den trees, and logs on the forest floor. This natural succession adds to the diversity of the upland habitat for birds and wildlife. Because of the tract's large size, the low level of disturbance, and its high level of protection, its capability as a habitat protection area is excellent. This tract also supports a popular 1.25-mile hiking trail that connects with a trail system on the North Chickamauga Creek Greenway Conservancy.

Uses proposed for this tract should be limited to those that would complement its current amenities. This parcel has a high probability for cultural resources, but only a small portion has been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-2. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–SW
TVA D-Stage Map Numbers	4
Stream Mile and Bank	TRM 471.5R
Land Use/Land Cover	Upland hardwood forest
Known Dispersed Recreation Opportunities	Hiking and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Additional trails • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	North Chickamauga Creek Conservancy

Parcel 3 - (18.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel includes two noncontiguous tracts of land and adjoins former TVA property (XCR-444 and XCR-642). A portion of the parcel supports the boat slips and fuel services operated as a part of Lakeshore Marina. The remainder of the parcel supports Gold Point Marina with amenities including boat slips, a boat-launching ramp, and fuel services. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. A cave is known adjacent to this parcel. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-3. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	4
Stream Mile and Bank	TRM 471.6 to 473.0R

Parcel 4 - (3.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located adjacent to the navigational sailing line, and often commercial barge traffic awaits use of the Chickamauga Dam Lock in this area. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-4. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112−SW
TVA D-Stage Map Numbers	4
Stream Mile and Bank	TRM 471.9R
Land Use/Land Cover	Mixture of maintained lawn and shrubs
Known Dispersed Recreation Opportunities	None
Current Agreements/Commitments	• Permanent easements to State-Wide Enterprises, Inc. for a sewage treatment plant and sewer lines. • Revocable license to the city of Chattanooga, Tennessee, for sewer lines
Potential Projects	None Identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Partners	• City of Chattanooga, Tennessee, • State-Wide Enterprises, Inc.

Parcel 5 - (2.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Tennessee River. The tract extends from TVA marker 4-28 to Privateer Yacht Club. This parcel lies entirely below the 690-foot msl contour, and the current land cover is deciduous forest and maintained lawns. Riverglen Subdivision is located on the back-lying private property. This parcel has a medium probability for the presence of cultural resources. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4-5. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–SW
TVA D-Stage Map Numbers	4
Stream Mile and Bank	TRM 473.3R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract(s)	XCR–49 and XCR–451
Structure Profile	None
Current Agreements/Commitments	Approved water use facilities

Parcel 6 - (3.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located below the 690-foot msl contour and adjoins former TVA property (XCR-49). The site is managed as a part of Privateer Yacht Club, and amenities include boat slips and fueling services. This parcel has a low probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-6. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	4
Stream Mile and Bank	TRM 473.6R

Parcel 7 - (7.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This narrow parcel is adjacent to Breakwater Estates and serves as a buffer between the residential developments and the reservoir. Portions of this parcel have a medium probability for the presence of cultural resources, but this parcel has not been surveyed. TVA has previously allowed shoreline stabilization activities and removal of storm-damaged vegetation. However, the back-lying property owners do not have the necessary rights for private water use facilities and requests for such facilities would not be considered.

Table 4-7. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–SW and 112–NW
TVA D-Stage Map Numbers	4
Stream Mile and Bank	TRM 474.0R
Land Use/Land Cover	Upland hardwoods and open shoreline
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Land-use permits for minor cleaning and landscaping
Potential Projects	• Continue efforts to eliminated unauthorized clearing of vegetation • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Breakwater Estates

Parcel 8 - (178.0 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is composed of three noncontiguous tracts of land and managed collectively as Fairview Slopes HPA. The parcel supports several populations of the federally listed large-

flowered skullcap (*Scutellaria montana*) and has been used by wintering bald eagles for roosting. There is a medium probability for the presence of cultural resources on this parcel. The parcel has not been surveyed, and therefore, significant archaeological sites could be present.

The forest cover is primarily mature oak-hickory with some pine component. The pine component was heavily impacted by southern pine beetle infestations occurring in the early 2000's. English ivy is present on a small portion of the HPA, and in another location an infrequently used unauthorized all-terrain vehicle (ATV) trail is also present.

Uses proposed for this parcel should be limited to those that would complement its current amenities. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-8. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112-SW and 112-NW
TVA D-Stage Map Numbers	4 and 8
Stream Mile and Bank	TRMs 474.0R to 476.0R
Land Use / Land Cover	Upland hardwood forest
Known Dispersed Recreation Opportunities	Hiking and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Continue efforts to prevent the use of unauthorized vehicles • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties • Implementation of natural areas management plan
Potential Partners	None identified

Parcel 9 - (5.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel includes a navigation light and a safety landing. Safety landings are available for barges and recreational boats during adverse weather conditions or equipment malfunction. Future development of this tract would be restricted. The parcel supports several populations of the federally listed large-flowered skullcap (*Scutellaria montana*). This parcel has a medium

probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-9. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–SW
TVA D-Stage Map Numbers	4 and 5
Stream Mile and Bank	TRM 474R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None
Current Agreements/Commitments	None
Potential Projects	None Identified
Potential Partners	None Identified

Parcel 10 - (8.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Tennessee River. The tract extends from TVA marker 524-1B to 254-1D. This parcel lies entirely below the 685.44-foot msl contour, and the current land cover is deciduous forest and maintained lawns. The TVA-developed Fairview Subdivision is located on the back-lying private property. This parcel has a medium to low probability for the presence of cultural resources. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4-10. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	8
Stream Mile and Bank	TRM 474.5R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract(s)	XCR–382 and XCR–448
Structure Profile	690–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 11 - (6.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located below the 690-foot msl contour and adjoins former TVA property (XCR-583). The site is managed as part of Big Ridge Marina, and amenities include boat slips, a boat-launching ramp, and fueling services. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-11. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	8
Stream Mile and Bank	TRM 475.3R

Parcel 12 - (1.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land located along the right descending bank of Tennessee River. The parcel surrounds the back of two small coves. This parcel lies entirely below the 685.44-foot msl contour, and the current land cover is deciduous forest. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4-12. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	8 and 12
Stream Mile and Bank	Tennessee Rive Mile 476R
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract(s)	XCR–50, XCR–51, and XCR–52
Structure Profile	690-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 13 - (5.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located in an embayment adjacent to TRM 476.2. The parcel is under a permanent easement to Hixson Utility District for a waste water treatment plant. However, the facility has not yet been constructed. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests consistent with the permanent easement would be considered.

Table 4-13. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	8
Stream Mile and Bank	TRM 476.2R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None
Current Agreements/Commitments	Permanent easement to Hixson Utility District for a waste water treatment plant
Potential Projects	None identified
Potential Partners	None identified

Parcel 14 - (55.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel contains mostly mixed pine/hardwood stands with some Virginia pine clusters. The parcel is presently used for informal recreation and is accessible by an old abandoned road that previously served a rock quarry. The parcel is steep and provides a panoramic view of the reservoir, while providing a visual buffer between lake users and residential development. The parcel is on the northern fringe of an expanding urban area and will serve informal recreation needs of this growing urban area. Bald eagles have been observed within this parcel. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-14. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	8
Stream Mile and Bank	TRM 476.3R
Land Use/Land Cover	Upland Hardwood/Pine
Known Dispersed Recreation Opportunities	Informal hiking, hunting, and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 15 - (2.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located below the 685.44-foot msl contour and adjoins former TVA property (XCR-53). In January 2006, TVA modified the deed for XCR-53 upon the request of the back-lying property owner. A portion of the deed modification impacted Parcel 15. Specifically, the deed modification relinquished the egress and ingress rights of the back-lying property owner across Parcel 15. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered. The parcel has a low probability for the presence of undisturbed cultural resources.

Table 4-15. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	8
Stream Mile and Bank	TRM 476.4R
Land Use/Land Cover	Upland hardwoods and pines
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 16 - (0.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Tennessee River and surrounds an existing community dock facility. This parcel lies entirely below the 685.44-foot msl contour, and the current land cover is upland hardwood forest in its natural state. This parcel adjoins River Preserve subdivision. A community water use facility has been constructed along the shoreline fronting the common lot. This parcel has a medium probability for the presence of cultural resources. Water use facilities are limited to this common area for the subdivision based upon current deed restrictions.

Table 4-16. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	10
Stream Mile and Bank	Tennessee Rive Mile 477.5R
Land Use/Land Cover	Upland hardwood forest with minor landscaping for community dock access
Fronts Former TVA Tract(s)	XCR–53
Structure Profile	690–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 17 - (0.6 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is a buffer around a known historic cemetery that is not on TVA land. It is not uncommon for unmarked graves to be found outside the formal boundaries of a cemetery; this parcel should be considered very sensitive. It has not been surveyed for cultural resources.

Only requests that support the integrity of the cemetery or other cultural resources would be considered.

Table 4-17. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	8
Stream Mile and Bank	TRM 477R
Land Use/Land Cover	Deciduous forest and maintained lawn
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to the Trustees of Foster-Hixson Cemetery for parking area
Potential Projects	• Refresh the existing paint denoting TVA's property boundary • Survey for historic properties
Potential Partners	Trustees of Foster-Hixson Cemetery

Parcel 18 - (213.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This large parcel is located along the right descending bank of the Tennessee River. It is encumbered by a revocable license agreement to Hamilton County, Tennessee for public recreation. This parcel, which is accessible from Gold Point Circle Road, is currently undeveloped; however, some informal recreation use occurs on the area. This site is managed as an adjunct to Hamilton County Park which is located upstream. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-18. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	12 and 18
Stream Mile and Bank	TRMs 477 to 479R

Parcel 19 - (2.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

The parcel consists of three small islands, one of which is accessible during the winter months. These islands provide valuable shallow water habitat and nesting cover for waterfowl and shorebirds. The parcel has a medium probability for the presence of cultural resources. The condition of the cultural resources has not been recently evaluated. A systematic survey would determine the integrity of the cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-19. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	8
Stream Mile and Bank	TRM 477.8R
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Hunting, fishing, primitive camping, and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 20 - (1.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located at the confluence of the Tennessee River and Wolftever Creek. A safety landing stretches along the right descending bank between TRMs 478.6 and 478.9. The Gold Point navigation light is also present on this parcel. Safety landings are available for barges and recreational boats during adverse weather conditions or equipment malfunction. This parcel has a medium probability for the presence of cultural resources. Future development of this tract would be restricted to support navigational purposes. Requests for private water use facilities would not be considered.

Table 4-20. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	8 and 12
Stream Mile and Bank	TRMs 478.6 to 478.9R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None
Current Agreements/Commitments	Revocable license to Hamilton County, Tennessee for a park
Potential Projects	None Identified
Potential Partners	Hamilton County, Tennessee

Parcel 21 - (6.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land located along the right descending bank of Tennessee River. The parcel extends among TVA markers 12-17 to 150-112-15 B and TVA marker 12-41 to 12-20. This parcel lies entirely below the 690-foot msl contour, and the current land cover is mixed pine and hardwood forest with maintained lawns. Sun Bank Cove subdivision is located on the back-lying property of the southern portion of the parcel. This parcel has a medium probability for the presence of cultural resources in undisturbed areas. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4-21. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	12
Stream Mile and Bank	Tennessee Rive Mile 479R and 479.2R
Land Use/Land Cover	Mixed pine & hardwood forest and maintained lawns
Fronts Former TVA Tract(s)	XCR–54, XCR–55, XCR–427, XCR–428, XCR–429, XCR–430, XCR–431, XCR–432, XCR–433, XCR–434, XCR–435, and XCR–436
Structure Profile	Various
Current Agreements/Commitments	Approved water use facilities

Parcel 22 - (2.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located below the 690-foot msl contour and adjoins former TVA property (XTCR-52) transferred to the state of Tennessee for public recreation. This parcel is currently undeveloped, but the area receives some informal recreation day use and bank fishing. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-22. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	12
Stream Mile and Bank	TRM 479R

Parcel 23 - (119.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel consists of two noncontiguous tracts of land within Prairie Creek and an island within the Tennessee River.

The largest tract and island are located at the confluence of Prairie Creek and the Tennessee River and adjacent to former TVA property (XTCR-159) transferred to Hamilton County, Tennessee for public recreation. Chester Frost Park has been developed at this location, and amenities include boat-launching ramps, fishing piers, full service camping accommodations, picnic facilities with group pavilions, a swimming beach, and trails. The park is accessible via Gold Point Circle Road.

The smaller tract is situated entirely within Prairie Creek, locally known as Dallas Bay Embayment. This portion of the parcel is adjacent to former TVA property (XTCR-53) transferred to the state of Tennessee for public recreation. The site has not been developed and is not accessible by road.

Portions of this parcel have a high probability for the presence of cultural resources. Due to heavy development other portions have a low probability, but none of this parcel has been

adequately surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-23. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	12 and 17
Stream Mile and Bank	TRM 480R

Parcel 24 - (59.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land located along the left descending bank of Prairie Creek on the Tennessee River. The tract extends among TVA markers 12-7 to 12-8 and TVA markers 17-19 to 17-20. These tracts of land lie entirely below the 690-foot msl contour, and the current land cover is pine and hardwood forest with maintained lawns. Stewarts Ferry, Lakeside, and Wedgewood subdivisions are located on the back-lying private property. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4-24. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	17
Stream Mile and Bank	Prairie Creek 2.2L
Land Use/Land Cover	Pine and hardwood forest with maintained lawns
Fronts Former TVA Tract(s)	XCR–57, XCR–58, XCR–365, and XCR–368
Structure Profile	Various
Current Agreements/Commitments	Approved water use facilities

Parcel 25 - (25.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located below the 690-foot msl contour and adjoins former TVA property (XCR-425). The parcel is managed as part of Camp Columbus, a private membership camp.

Amenities include a boat-launching ramp, a campground, and a picnic area. Camp Columbus is accessible via Hixson Pike.

Portions of this parcel have a high probability for the presence of cultural resources. Due to heavy development other portions have a low probability, but none of this parcel has been adequately surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-25. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	12 and 17
Stream Mile and Bank	TRM 480R

Parcel 26 - (1.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is a small island located in Prairie. The land cover is wooded and provides for adequate wildlife observation. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-26. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	17
Stream Mile and Bank	TRM 480.3R
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	None identified

Parcel 27 - (15.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending banks of Dallas Branch and Prairie Creek. This parcel lies entirely below the 690-foot msl contour, and the current land cover is pine and hardwood forest with maintained lawns. Prairie Peninsula, Sequoia Hills, and Brighton subdivisions are located on the back-lying private property. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4-27. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	17
Stream Mile and Bank	Dallas Branch Mile 0.7R
Land Use/Land Cover	Pine and hardwood forest with maintained lawns
Fronts Former TVA Tract(s)	XCR–59, XCR–425, XCR–462, XCR–463
Structure Profile	Various
Current Agreements/Commitments	Approved water use facilities

Parcel 28 - (47.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along both banks of Dallas Branch and access is via Hixson Pike. In 2013, TVA approved a 30-year term easement to the city of Lakesite, Tennessee for public recreation over the parcel. The city of Lakesite, Tennessee has proposed to establish a day-use area that would include paved parking, picnic areas, restrooms, pavilions, primitive trails, a disc-golf course, fishing pier, canoe/kayak launch, and pedestrian bridge. Future park plans include adding a playground, extended pedestrian trails, pavilions, and additional restrooms. TVA completed an environmental assessment on the proposed actions, http://www.tva.com/environment/reports/lakesite/index.htm. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-28. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	17
Stream Mile and Bank	TRM 480.5R

Parcel 29 - (2.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located in the headwaters of the Dallas Branch embayment and contains a portion of the right-of-way (ROW) for SR-319. This parcel has a low probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-29. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D–Stage Map Numbers	17
Stream Mile and Bank	Dallas Branch mile 1.1B TRM 480.5R
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Permanent easement to Tennessee Department of Transportation for a roadway
Potential Projects	None identified
Potential Partners	Tennessee Department of Transportation

Parcel 30 - (0.1 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This narrow parcel is located entirely below the 685.44-foot msl contour within the headwaters of Dallas Branch and north of Hixson Pike. The adjacent land use consists of a climate controlled self-storage business and a portion of the ROW for Dallas Hollow Road. This parcel has a low probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4-30. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	17
Stream Mile and Bank	Dallas Branch Mile 1.7B TRM 480.5R
Land Use/Land Cover	Maintained lawn
Current Agreements/Commitments	None identified

Parcel 31 - (13.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Dallas Branch. This parcel lies entirely below either the 685.44-foot msl contour or the 690-foot msl contour, depending on the location. The current land cover is deciduous forest and maintained lawns. Dallas Branch and Prairie Creek subdivisions are located on the back-lying private property. This parcel has a medium probability for the presence of cultural resources. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4-31. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	17
Stream Mile and Bank	Dallas Branch 0.7L
Land Use/Land Cover	Pine and hardwood forest with maintained lawns
Fronts Former TVA Tract(s)	XCR–61 and XCR–62
Structure Profile	Various
Current Agreements/Commitments	Approved water use facilities

Parcel 31a - (0.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel represents an area where the back-lying property was never held in ownership by TVA and the appropriate rights for private water use facilities do not exist. This parcel has a low probability for the presence of undisturbed cultural resources, but it has not been surveyed.

No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-31a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	17
Stream Mile and Bank	Dallas Branch 0.7L
Land Use/Land Cover	Maintained lawn
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	None identified

Parcel 32 - (1.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located entirely below the 685.44-foot msl contour and adjoins former TVA property (XCR-63 and XCR-150). The parcel is managed as part of Camp Dixie Group Camp and is accessed via Hixson Pike. Amenities include boat slips and a fishing pier. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-32. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	17
Stream Mile and Bank	TRM 480.6R

Parcel 33 - (12.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is one contiguous tract of land located along the right descending bank of Tennessee River. This parcel lies entirely below either the 685.44-foot msl contour or the 690-foot msl contour, depending on the location. The current land cover is pine and hardwood forest with maintained lawns. Chimney Hills and Rocky Point subdivisions are located on the back-

lying private property. This parcel has a high probability for the presence of cultural resources. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4-33. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW and 112–NE
TVA D-Stage Map Numbers	17
Stream Mile and Bank	TRM 481R
Land Use/Land Cover	Pine and hardwood forest with maintained lawns
Fronts Former TVA Tract(s)	XCR–150, XCR–151, and XCR–152
Structure Profile	690-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 34 - (6.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This is a relatively small parcel is located along the right descending bank of the Tennessee River near Jones Bay. While the parcel provides an informal recreation opportunity, a residential development borders the parcel to the west. The vegetation on the parcel has been impacted, and potentially unauthorized land-based structures are present. TVA would continue to investigate these structures. This parcel has a low probability for the presence of undisturbed cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-34. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	17
Stream Mile and Bank	TRM 482.0R
Land Use/Land Cover	Mixed hardwood
Known Dispersed Recreation Opportunities	Informal hiking and bank fishing
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Continue efforts to eliminate unauthorized vegetation removal and unauthorized structures • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 35 - (6.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel includes shorelines on both the right and left banks of Jones Bay and is accessible via Hixson Pike. The portion of the parcel located along the right descending bank is managed as Harbor Lights Yacht Club, a private membership club, and amenities include boat slips.

The portion of the parcel located along the left descending bank includes property managed by Harbor Lights Marina and the state of Tennessee. Harbor Lights Marina is located near the confluence with the Tennessee River. This commercial recreation area includes wet and dry boat storage accommodations, fuel services, and a boat-launching ramp.

The portion of the parcel managed by the state of Tennessee is located between TVA monuments 210–1 to 208-2 and adjacent to former TVA property (XTCR- 5) transferred for public recreation. This portion of the parcel is undeveloped. This parcel has a low probability for the presence of cultural resources. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-35. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	17
Stream Mile and Bank	TRM 480.6R

Parcel 36 - (1.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for SR-319 and Hamby Road. While a portion of the parcel is located adjacent to former TVA property (XTCR-5) which was transferred to the state of Tennessee for public recreation purposes, the intent of this parcel is support the road ROWs. In locations where the road ROWs and public recreation are complementary, requests to support the back-lying public recreation would be considered. This parcel has a low probability for the presence of cultural resources. However, requests for private water use facilities would not be considered.

Table 4-36. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW and 112–NE
TVA D–Stage Map Numbers	20
Stream Mile and Bank	TRM 482R
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easement to Tennessee Department of Transportation for a roadway • Revocable license to the state of Tennessee for public recreation
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 37 - (1.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land located along both descending bank of Jones Bay. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is pine and hardwood forest with maintained lawns. Haven Bay subdivision is located on the back-lying private property. This parcel has a medium probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-37. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW and 112–NE
TVA D-Stage Map Numbers	20
Stream Mile and Bank	TRM 482R
Land Use/Land Cover	Pine and hardwood forest with maintained lawns
Fronts Former TVA Tract(s)	XCR–64 and XCR–66
Structure Profile	690–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 38 - (9.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel was a former TVA property (XCR-65), but TVA reacquired the property in 2004 during a project relating to the Maintain and Gain Shoreline Policy adopted in SMP. However, the TVA Board terminated this policy on August 20, 2009 (http://www.tva.gov/river/landandshore/pdfs/shorelnk.pdf).

The parcel contains mixed hardwoods, scattered pines, and wetlands bordering the shoreline. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-38. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE and 112–NW
TVA D-Stage Map Numbers	20
Stream Mile and Bank	TRM 482.0R
Land Use / Land Cover	Mixed hardwood
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 39 - (6.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is one contiguous tract of land located along the right descending bank of Tennessee River. This parcel lies entirely below either the 685.44-foot msl contour or the 690-foot msl contour, depending on the location. The current land cover is pine and hardwood forest with maintained lawns. Hunter Hills, Freedom, and Rivers Edge subdivisions are located on the back-lying private property. This parcel has a medium probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-39. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	17 and 20
Stream Mile and Bank	TRM 482R
Land Use large-flowered Land Cover	Pine and hardwood forest with maintained lawns
Fronts Former TVA Tract(s)	XCR–67, XCR–153, and XCR–154
Structure Profile	690–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 40 - (3.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of four small islands. While small in size these islands can provide important habitat for wildlife in this area. The existing cover type is mixed hardwoods, with some red cedar and privet in the understory. The southern island does have a historic causeway connecting it to the mainland. This island does contain important wetlands which provide a great habitat for wetland associated wildlife species. This parcel has a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-40. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE

Location Component and Public Involvement Opportunities	Parcel Specific Information
TVA D-Stage Map Numbers	20
Stream Mile and Bank	TRM 482.7R
Land Use/Land Cover	Mixed hardwood
Known Dispersed Recreation Opportunities	Fishing and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 41 - (39.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the right descending bank of Tennessee River. This parcel lies entirely below either the 685.44-foot msl contour or the 690-foot msl contour, depending on the location. The current land cover is pine and hardwood forest with maintained lawns. Shady Grove and Flibeta subdivisions are located on the back-lying private property. This parcel has a medium to high probability for the presence of cultural resources. This parcel has not been adequately surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-41. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE and 112–NE
TVA D-Stage Map Numbers	20 and 22
Stream Mile and Bank	TRM 486R
Land Use/Land Cover	Pine and hardwood forest with maintained lawns
Fronts Former TVA Tract(s)	XCR–71, XCR–159, XCR–304, and XCR–305
Structure Profile	690–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 41a - (0.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel consist of two noncontiguous tracts of land that represent an area where the back-lying property was never held in ownership by TVA and the appropriate rights for private water use facilities do not exist. This parcel has a low probability for the presence of undisturbed cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-41a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	22
Stream Mile and Bank	TRM 486.8R
Land Use/Land Cover	Hardwood forest and maintained lawn
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 42 - (10.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel provides important habitat for wildlife in this area. At one time, this parcel contained large loblolly and shortleaf pines. One of the pines supported a bald eagle nest for several years. Around 2001, southern pine beetle infestations impacted most of the pines from the stand, and the tree supporting the eagle nest fell. The existing cover type is now upland hardwoods, some very large oak and hickory, and a few pines scattered across the tract. This tract receives some use mainly by the adjoining neighborhood, and unauthorized vegetation removal has occurred on a portion of the parcel.

This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-42. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	22
Stream Mile and Bank	TRM 485.9R
Land Use/Land Cover	Upland hardwood
Known Dispersed Recreation Opportunities	Informal hiking and bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Continued efforts to eliminate unauthorized vegetation removal • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 43 - (35.2 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Soddy Creek HPA and occupies over one mile of shoreline extending downstream from the confluence of Soddy Creek and the Tennessee River. It is of importance that the shoreline be protected from any disturbance. The parcel features habitat that is suitable for large-flowered skullcap (*Scutellaria montana*), and the area is regularly used by bald eagles. This parcel has a medium probability for the presence of cultural resources, but it has not been adequately surveyed. Known archaeological sites would require additional testing to determine their integrity.

While this area provides a good recreational bank fishing area, the parcel is highly visible from broad expanses of the reservoir, visually significant, and easily accessible by boat. The shoreline is very steep over much of the tract, and 80 percent of its length has severe erosion potential. The parcel is adjacent to a residential development, and there have been unauthorized vegetation removal on TVA property. No existing authorized shoreline

improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-43. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111-SE
TVA D-Stage Map Numbers	22
Stream Mile and Bank	TRM 487.0R
Land Use/Land Cover	Mixed hardwood
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Shoreline stability • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic Survey for historic properties • Implementation of natural areas management plan
Potential Partners	Adjacent property owners

Parcel 44 - (4.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel lies entirely below the 685.44-foot msl contour and is managed as part of Shady Grove Harbor Marina. This commercial recreation area includes boat slips, fuel services, and a campground. Hixson Pike provides access to the area. Requests for private water use facilities would not be considered. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-44. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	22
Stream Mile and Bank	Soddy Creek Mile 0.5R

Parcel 45 - (8.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses six noncontiguous tracts of land and contains portions of ROWs for SR-319, Armstrong Road, Clift Eldridge Road, and Lakeview Circle. While portions of the parcel are located adjacent to TVA property allocated for other purposes, the intent of this parcel is support the road ROWs. The road portions of this parcel have a low probability for the presence of cultural resources, but the entire parcel has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-45. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SW and 111–SE
TVA D–Stage Map Numbers	22, 24, and 25
Stream Mile and Bank	Soddy Creek Miles 0.75 to 1.2B TRM 487.5R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easement to Tennessee Department of Transportation for a roadway • Revocable license to a private individual for a driveway
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 46 - (90.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of four noncontiguous tracts of land and separated by Hixson Pike. The northern portion borders a residential development to the west with unauthorized use of TVA property consisting of storage of materials, vehicles, and a maze of unauthorized roads. The larger portion lying south of Hixson Pike is mature upland hardwood. This parcel, at one time, included mature loblolly pine. However, the trees have been removed due to southern pine beetle infestations. The remainder of the parcel lies between Hixson Pike and the slough in Shady Grove Hollow. The shoreline portions receive frequent bank fishing, and the larger portion on the south side of Hixson Pike is popular for hunting. Parking is limited on all portions of the parcel. This parcel has a medium probability for the presence of cultural resources, but it

has not been surveyed. No existing authorized shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-46. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE and 111–SW
TVA D-Stage Map Numbers	22 and 25
Stream Mile and Bank	Soddy Creek Miles 0.8 to 1.4R
Land Use/Land Cover	Upland hardwood
Known Dispersed Recreation Opportunities	Hunting and bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Improve parking access • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 47 - (2.3 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel consists of two noncontiguous tracts of land within Soddy Creek. The entire tract is currently covered with deciduous forest. Access to the tract is available via Hixson Pike. There are contractual agreements present on this property, but development of the property has not occurred. Until this tract is selected for development, TVA will continue management of upland wildlife game species. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4-47. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	22 and 25
Stream Mile and Bank	Soddy Creek Mile 0.8R TRM 487.5R
Land Use/Land Cover	Deciduous forest

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Revocable license to Arrow Transportation Company for a barge terminal • Revocable license agreement with Charles R. Page, Jr., and Associates for a barge terminal

Parcel 48 - (2.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is located entirely below the 690-foot msl contour and adjacent to former TVA property (XTCR-61) transferred to the state of Tennessee for public recreation. This parcel is accessible via Hixson Pike and is currently undeveloped. This parcel has a low probability for the presence of cultural resources. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-48. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	24
Stream Mile and Bank	Soddy Creek Mile 1.2R

Parcel 49 - (10.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the right descending bank of Soddy Creek. This parcel lies entirely below either the 685.44-foot msl contour or the 690-foot msl contour, depending on the location. The current land cover is pine and hardwood forest with maintained lawns. Soddy Lake Heights and Pine Harbor Heights subdivisions are located on the back-lying private property. This parcel has a medium probability for the presence of cultural resources, but the larger areas have not been adequately surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-49. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SW
TVA D-Stage Map Numbers	24 and 25
Stream Mile and Bank	Soddy Creek Mile 2.2R
Land Use/Land Cover	Pine and hardwood forest with maintained lawns
Fronts Former TVA Tract(s)	XCR–107, XCR–467, and XCR–585
Structure Profile	Various
Current Agreements/Commitments	Approved water use facilities

Parcel 49a - (0.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel represents an area where the back-lying property was never held in ownership by TVA and the appropriate rights for private water use facilities do not exist. This parcel has a medium probability for the presence of cultural resources, but the larger areas have not been adequately surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-49a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SW
TVA D-Stage Map Numbers	24
Stream Mile and Bank	Soddy Creek Mile 1.5R
Land Use/Land Cover	Hardwood forest and maintained lawn
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 50 - (0.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This small parcel is located below the 685.44-foot msl contour and is managed as part of Pine Harbor Marina. The amenities at this commercial recreation area include a boat-launching ramp, boat slips, and marine services. Access to the parcel is via Hixson Pike. The undeveloped portion of this parcel has a low to medium probability for the presence of cultural resources. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-50. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	24
Stream Mile and Bank	Soddy Creek Mile 1.7R

Parcel 51 - (3.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is located entirely below the 690-foot msl contour and adjacent to former TVA properties (XTCR 9 and XTCR-59) transferred to the state of Tennessee for public recreation. The parcel is currently undeveloped and accessible from Hixson Pike. This parcel has a low probability for the presence of cultural resources. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-51. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	24
Stream Mile and Bank	Soddy Creek Mile 2.7R

Parcel 52 - (1.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This small parcel is located in the back of cove along the right descending bank of Soddy Creek. This parcel lies entirely below the 685.44-foot msl contour between TVA monuments 24-1 and 24-2. The current land cover is pine and hardwood forest with maintained lawns. This parcel has

a low to medium probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-52. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SW
TVA D-Stage Map Numbers	24
Stream Mile and Bank	Soddy Creek Mile 2.9R
Land Use/Land Cover	Pine and hardwood forest with maintained lawns
Fronts Former TVA Tract(s)	XCR–108
Structure Profile	690–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 53 - (6.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This narrow parcel serves as a buffer along Soddy Creek. The land cover is deciduous forest and pines. The parcel provides excellent bank fishing opportunities. This parcel has a low probability for the presence of undisturbed cultural resources. However, this area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-53. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SW
TVA D-Stage Map Numbers	24 and 27
Stream Mile and Bank	Soddy Creek Mile 2.8R
Land Use/Land Cover	Upland hardwoods and pines
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	License for an underground water utility
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 54 - (20.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is encumbered with a 30-year term easement to the city of Soddy Daisy, Tennessee. The parcel has been developed as a day use park with a boat-launching ramp and picnic area. The area is located approximately one-half mile from U.S. Highway 27. The undeveloped portions of this parcel have a high probability for the presence of cultural resources, and the area has not been adequately surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-54. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	27
Stream Mile and Bank	Soddy Creek Mile 3.5R

Parcel 55 - (3.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Soddy and lies entirely below the 690-foot msl contour. The current land cover is deciduous trees with maintained lawns. Holly Heights and Pine Harbor Heights subdivisions are located on the back-lying private property. This parcel has a medium probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-55. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SW
TVA D-Stage Map Numbers	27
Stream Mile and Bank	Soddy Creek Mile 4R
Land Use/Land Cover	Deciduous trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–514 and XCR–515
Structure Profile	699–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 56 - (2.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the right descending bank of Soddy Creek. A portion of the parcel encompasses the causeway and right of way for U.S. 27 and a pumping station. The remainder of the parcel is encumbered with wastewater operations associated with the Northwest Utility District of Hamilton County.

There is also a garage service located on private property and adjacent to a portion of the parcel. Although the private business is industrial in nature, water-based facilities or a need to utilize TVA property for industrial purposes are not warranted at this time. Requests for private water use facilities would not be considered. This parcel has a low probability for undisturbed cultural resources, but it has not been surveyed.

Table 4-56. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SW
TVA D-Stage Map Numbers	27
Stream Mile and Bank	Soddy Creek Mile 4.2R TRM 487.5R
Land Use/Land Cover	Maintained lawn and wastewater treatment
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to Daisy-Soddy Falling Water Utility District • Permanent easement to the state of Tennessee for a roadway • Revocable license to the Electric Power Board of Chattanooga for electric utilities
Potential Projects	None identified
Potential Partners	None identified

Parcel 57 - (0.9 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel consists of two noncontiguous tracts of land within Soddy Creek. The entire parcel is currently covered with deciduous forest, and access is available via Hixson Pike. The parcel is adjacent to former TVA property (XCR-515), and development of the property has not occurred. Hamilton County, Tennessee, classified the back-lying property (Hamilton County

Parcel 049 003) as commercial. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered. This parcel has a medium probability for the presence of cultural resources, but it has not been adequately surveyed.

Table 4-57. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SW
TVA D-Stage Map Numbers	27
Stream Mile and Bank	Soddy Creek Mile 4.2R TRM 487.5R
Land Use/Land Cover	Deciduous forest
Current Agreements/Commitments	None identified

Parcel 58 - (51.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is encumbered with easements and licenses to the city of Soddy Daisy, Tennessee and the state of Tennessee for public recreation. Amenities include a roadside park with picnic facilities, a fishing pier, and sports field. The sports complex and fishing pier are managed by the city of Soddy Daisy, Tennessee. The roadside park is managed by the state of Tennessee, and the northern portion of the parcel remains under TVA management. The parcel is accessible from US Highway 27. The undeveloped portions of this parcel have a medium probability for the presence of cultural resources. Portions of this parcel have not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-58. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	27
Stream Mile and Bank	Soddy Creek Mile 4.0R

Parcel 59 - (16.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Soddy Creek and encompasses a portion of the ROWs for Dayton Pike and U.S. 27. This parcel has a low probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-59. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SW
TVA D-Stage Map Numbers	27
Stream Mile and Bank	Soddy Creek Mile 4.2R TRM 487.5R
Land Use/Land Cover	Maintained lawn and roadway
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easements to the city of Soddy Daisy, Tennessee for a fire station and sewer utilities • Permanent easements to the state of Tennessee for public recreation and roadways • Revocable licenses to the Electric Power Board of Chattanooga for electric utilities • Revocable license to the city of Soddy Daisy, Tennessee for fill and build • Revocable license to South Central Bell for telephone utilities • Term easement to the city of Soddy Daisy for public recreation
Potential Projects	None identified
Potential Partners	None identified

Parcel 60 - (47.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located adjacent to U.S. Highway 27. Soddy Creek bisects the north end of the tract. The land cover is dominated by loblolly pine with some hardwood component. Forest management via thinning operations has occurred in the recent past. This property serves as a small wooded area supporting wildlife in an otherwise developed area.

Unauthorized vegetation management has occurred in the south central portion of the tract and along the southern boundary. This parcel has been surveyed for cultural resources. There is a

low probability for the presence of cultural resources. No existing authorized shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-60. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SW
TVA D-Stage Map Numbers	27
Stream Mile and Bank	Soddy Creek Mile 4.5R
Land Use/Land Cover	Upland hardwoods and pines
Known Dispersed Recreation Opportunities	Informal hiking
Current Agreements/Commitments	None identified
Potential Projects	• Continue efforts to eliminate unauthorized use • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary
Potential Partners	None identified

Parcel 61 - (2.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This narrow parcel extends to the center line of Osage Drive and serves as a buffer between the roadway and the reservoir. The parcel is adjacent to former TVA property (XCR-521 and XCR-522) that was sold to the center line of Osage Drive. Since the parcel extends to the center line of Osage Drive and not a specific contour, the appropriate rights for private water use facilities do not exist.

Portions are mowed by back lying landowners, and some existing shoreline improvements are currently present. Existing previously approved private water use facilities would be allowed to remain; however, requests for new private water use facilities would not be considered.

Table 4-61. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SW
TVA D-Stage Map Numbers	27
Stream Mile and Bank	Soddy Creek Mile 4.5L
Land Use/Land Cover	Open shoreline and upland hardwood
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 62 - (11.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This two mile long shoreline parcel is adjacent to three former TVA property tracts (XTCR-57, XTCR-11, and XTCR-58) that were transferred to the state of Tennessee for public recreation. This parcel and the back lying land is predominately steep and wooded, and is currently undeveloped. Most of this parcel has a low probability for the presence of cultural resources. The northern portion has a medium probability for the presence of cultural resources and has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-62. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	27
Stream Mile and Bank	Soddy Creek Miles 2.5 to 4.5L

Parcel 63 - (6.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel lies entirely below the 685.44-foot msl contour between TVA monuments 760-1A and 824-1A. The current land cover is deciduous trees with maintained lawns. TVA developed North Soddy Creek subdivision is located on the back-lying private property. This parcel has a

medium probability for the presence of cultural resources. A cave occurs on this parcel and another occurs on an adjacent property. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-63. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SW and 11–SE
TVA D-Stage Map Numbers	24, 25, and 27
Stream Mile and Bank	Soddy Creek Mile 1.9L
Land Use/Land Cover	Deciduous trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–109
Structure Profile	690–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 64 - (5.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel lies entirely below the 690-foot msl contour and is adjacent to former TVA property (XTCR-10 and XTCR-60) transferred to the state of Tennessee for public recreation. The parcel and adjacent transferred land is mostly steep, wooded, and undeveloped. The downstream end of the parcel (located between TVA monuments 25-24 to 25-50A) adjoins former TVA property XTCR-10 and is immediately adjacent to Armstrong Road. A public boat-launching ramp has been developed on this part of the parcel. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-64. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	25
Stream Mile and Bank	Soddy Creek Miles 1.2 to 1.6L

Parcel 65 - (1.2 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small tract surrounds Wilcox Cemetery to the east of Armstrong Road. It is a shoreline buffer with some hardwood tree cover and areas of open shoreline. The close proximity of this parcel to a known historic cemetery renders a high probability for cultural resources. This parcel has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-65. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111-SE
TVA D-Stage Map Numbers	25
Stream Mile and Bank	Soddy Creek 1L
Land Use/Land Cover	Hardwoods and open shoreline
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None Identified
Potential Projects	Systematic Survey for historic properties
Potential Partners	None identified

Parcel 66 - (2.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Soddy Creek. This parcel lies entirely below the 690-foot msl contour between TVA monuments 25-45A and 25-38. The current land cover is deciduous trees with maintained lawns. This parcel has a low probability for the presence of cultural resources except in the vicinity of the cemetery in the adjacent parcel. This parcel has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-66. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	25
Stream Mile and Bank	Soddy Creek Mile 0.9L
Land Use/Land Cover	Deciduous trees with maintained lawns

Location Component and Public Involvement Opportunities	Parcel Specific Information
Fronts Former TVA Tract(s)	XCR-586
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 67 - (31.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This shoreline parcel lies entirely below the 690-foot msl contour and is adjacent to former TVA property (XTCR-62) transferred to the state of Tennessee for wildlife management. Currently, the area is managed by TWRA, http://www.state.tn.us/twra. The shoreline is dominated by mixed hardwoods, with some pine and red cedar as a component. The remainder of the shoreline is maintained as early successional cover or crops for wildlife habitat enhancement. This parcel has a medium probability for the presence of cultural resources, but has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-67. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	25
Stream Mile and Bank	Soddy Creek Mile 0.0 to 0.8L
Land Use/Land Cover	Mixed hardwood and open shoreline
Known Dispersed Recreation Opportunities	Wildlife enhancement
Current Agreements/Commitments	Permanent easement to the state of Tennessee for wildlife management
Potential Projects	Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 68 - (16.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River. This parcel lies entirely below either the 685.44-foot msl contour or the 690-foot msl contour, depending on the location. Bayshore Estates, Rivergate Bay, and Oak Cove Shores subdivisions are located on the back-lying private property. The current land cover is mixed pine and hardwood trees with

maintained lawns. The developed portion of this parcel has a low probability for the presence of cultural resources. The undeveloped portion of this parcel has a medium probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-68. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	25
Stream Mile and Bank	TRM 488.4R
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–110, XCR–111, XCR–423, XCR–424, XCR–468, and XCR–542
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 68a - (0.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

These two small parcels represent an area where the appropriate rights for private water use facilities do not exist. This parcel has a low probability for the presence of undisturbed cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-68a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	25
Stream Mile and Bank	TRMs 488.4 to 488.7R
Land Use/Land Cover	Mixed hardwood and open shoreline
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 69 - (19.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel consists of two noncontiguous tracts of land located at the confluence of Opossum Creek and the Tennessee River. The parcel is highly visible from both the Tennessee River and the secondary navigation channel entering Opossum Creek. This parcel has some unauthorized vegetation management. In the mid-1990's, the northern portion of the parcel was stabilized and replanted with native vegetation, and this are continues to recover well. The parcel has a high probability for the presence of cultural resources. Only a portion of the parcel has been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-69. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111-SE
TVA D-Stage Map Numbers	25
Stream Mile and Bank	TRM 489.8R
Land Use/Land Cover	Hardwood forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Replant with native vegetation • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic Survey for historic properties
Potential Partners	None identified

Parcel 70 - (7.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three non-contiguous tracts of land located along both banks of Opossum Creek. This parcel lies entirely below either the 685.44-foot msl contour or the 690-foot msl contour, depending on the location. Creek Hollow subdivision is located on the back-lying private property. The current land cover is mixed pine and hardwood trees and maintained lawns. Most of this parcel has a medium probability for the presence of cultural resources. That portion at the confluence has a high probability for the presence of cultural resources. Water

use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-70. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	25 and 28
Stream Mile and Bank	Opossum Creek Mile 0.7B
Land Use/Land Cover	Mixed pine and hardwood forest and maintained lawns
Fronts Former TVA Tract(s)	XCR–112, XCR–113, and XCR–474
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 71 - (54.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

The downstream portion of this parcel includes Possum Creek Recreation Area. While originally developed by TVA, the recreation area is now managed under a lease agreement for commercial recreation. Amenities include a boat-launching ramp, picnic area, and campground. The area is accessible via Lee Pike.

The upstream portion of this parcel (beginning at TVA Monument 28-6) consists of a narrow shoreline strip and lies entirely below the 685.44-foot msl contour. This area is adjacent to former TVA property (XCR-116 and XCR-117) TVA sold for group camp development. Amenities for this portion of the parcel include boat slips and a swimming beach.

The undeveloped portions of this parcel have a high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-71. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	28
Stream Mile and Bank	TRM 489.5R

Parcel 72 - (4.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses two noncontiguous tracts of land and contains a portion of the ROW for Lee Pike. While portions of the parcel are located adjacent to TVA property allocated for other purposes, the intent of this parcel is support the road ROWs. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-72. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D–Stage Map Numbers	28
Stream Mile and Bank	Opossum Creek Mile 1.2B TRM 489.3R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easements to Tennessee Department of Transportation for a bridge and roadway • Term lease for Possum Creek Recreation Area • Revocable license to Middle Tennessee Natural Gas Utility District for a gas pipeline • Revocable license to Southern Bell Telephone and Telegraph Company for a telephone line
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 73 - (15.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Opossum Creek. This parcel lies entirely below either the 685.44-foot msl contour or the 690-foot msl contour, depending on the location. The parcel stretches between TVA monuments 28-12 and 28-48. Creek Meadow, TVA-developed Opossum Creek, Harbor Haven, and Emerald Bay subdivisions are located on the back-lying private property. The current land cover is mixed pine, hardwood trees, and maintained lawns. Most of this parcel has a low probability for the presence of undisturbed cultural resources. The areas that have not been intensively developed have a medium

probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-73. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	28
Stream Mile and Bank	Opossum Creek Mile 2.2R
Land Use/Land Cover	Mixed pine, hardwood forest, and maintained lawns
Fronts Former TVA Tract(s)	XCR–119, XCR–120, XCR–149, and XCR–464
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 73a - (0.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel represents an area where the back-lying property was never held in ownership by TVA and the appropriate rights for private water use facilities do not exist. This parcel has a low probability for the presence of undisturbed cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-73a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	28
Stream Mile and Bank	Opossum Creek Mile 1.5R
Land Use/Land Cover	Hardwood forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 74 - (49.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is located entirely below the 690-foot msl contour and adjacent to former TVA property (XTCR-64) transferred to the state of Tennessee for public recreation. A portion of the parcel is also encumbered by an easement (XTCR-120E) to the state of Tennessee for public recreation. The parcel is mostly wooded and is undeveloped, and public road access to this parcel is currently not available. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-74. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	30
Stream Mile and Bank	TRM 489.5R

Parcel 75 - (12.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located on the upper most portion of Opossum Creek. Public access is limited, and lake access is not possible except during high water events. Land cover is predominantly mixed hardwood with evidence of some unauthorized agricultural use. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-75. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	30
Stream Mile and Bank	Opossum Creek Mile 5.5R
Land Use/Land Cover	Mixed hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Continued efforts to eliminate unauthorized agricultural use • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 76 - (11.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists is located along the left descending bank of Opossum Creek. This parcel lies entirely below the 685.44-foot msl contour and stretches between TVA monuments 30-1 and 641-1. The current land cover is mixed pine, hardwood trees, and maintained lawns. This parcel has a medium probability for the presence of cultural resources. It is adjacent to parcels that have a high probability, but have not been surveyed. Requests for private water use facilities would be considered.

Table 4-76. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	30
Stream Mile and Bank	Opossum Creek Mile 4.5L
Land Use/Land Cover	Mixed pine, hardwood forest, and maintained lawns
Fronts Former TVA Tract(s)	XCR–121, XCR–122, and XCR–123
Structure Profile	690–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 77 - (76.1 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel features the Possum Creek HPA with large populations of the federally listed large-flowered skullcap (*Scutellaria montana*). This relatively large parcel on Opossum Creek embayment consists of large upland hardwoods, with some young pines in the understory. The land consists of rolling ridges and small hollows with a south-west aspect. It formerly supported large sawtimber pines, but these trees were impacted around 2001 by the southern pine beetle

epidemic. This is an important parcel to upland wildlife as well as public land users. It receives legitimate dispersed recreation, as well as unauthorized motorized use. In 2014, the entire boundary of this parcel was re-established and marked with paint and signage. This parcel has a medium probability for the presence of cultural resources, but the parcel has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-77. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111-SE
TVA D-Stage Map Numbers	31, 30, and 28
Stream Mile and Bank	Opossum Creek Mile 3.3L
Land Use/Land Cover	Upland hardwood forest
Known Dispersed Recreation Opportunities	Wildlife Observation, bank fishing, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Continue efforts to prevent the use of unauthorized vehicles • Systematic Survey for historic properties
Potential Partners	None identified

Parcel 78 - (14.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

The northern portion of this shoreline parcel is adjacent to former TVA property (XTCR-65) transferred to the state of Tennessee for public recreation. This portion of the parcel lies below the 690-foot msl contour, is wooded, undeveloped, and not accessible by public road. There is a medium probability for the presence of cultural resources.

The southern portion of the parcel lies below the 685.44-foot contour msl and stretches between TVA Markers 28-15 to 28-16. This portion of the parcel is adjacent to former TVA property (XCR-84) sold for use as a group camp and is managed as part of the Chickamauga Fly and Bait Casting Club. There is a low probability for the presence of cultural resources. The entire parcel has not been surveyed.

Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-78. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	28
Stream Mile and Bank	TRM 489.5R

Parcel 79 - (1.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This small parcel is located along the left descending bank of Opossum Creek. This parcel lies entirely below the 690-foot msl contour and stretches between TVA monuments 30 and 31. The current land cover is mixed pine and hardwood trees. This parcel has a medium probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-79. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	28
Stream Mile and Bank	Opossum Creek Mile 1.7L
Land Use/Land Cover	Mixed pine and hardwood forest and maintained lawns
Fronts Former TVA Tract(s)	XCR–139
Structure Profile	690-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 80 - (14.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located at the confluence of Opossum Creek and the Tennessee River. This area forms a prominent point highly visible from both the main and secondary navigation channels entering Opossum Creek. Tree cover is dominated by upland hardwoods, pine and some red cedar component. The parcel has received dispersed recreation over the years. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-80. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	25 and 28
Stream Mile and Bank	TRM 490R
Land Use/Land Cover	Upland hardwoods, pines, and red cedars
Known Dispersed Recreation Opportunities	Hunting, bank fishing and informal hiking
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 81 - (28.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three non-contiguous tracts of land located along the right descending bank of the Tennessee River. This parcel lies entirely below either the 690-foot msl contour or the 685.44-foot msl contour, depending on the location. Linwood, Shore Acres, Thatcher Shore Acres and Lasley Land Development subdivisions are located on the back-lying private property. The current land cover is mixed pine and hardwood forest and maintained lawns. This parcel ranges from medium probability in the southwest to high probability in the northeast, for the presence of cultural resources. Most of this parcel has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-81. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	28 and 31
Stream Mile and Bank	TRM 490.0 – 493.4R
Land Use/Land Cover	Mixed pine and hardwood forest and maintained lawns
Fronts Former TVA Tract(s)	XCR–124, XCR–125, XCR–126, XCR–127, XCR–128, XCR–129, XCR–475, XCR–476, XCR–477,and XCR–509

Location Component and Public Involvement Opportunities	Parcel Specific Information
Structure Profile	Various
Current Agreements/Commitments	Approved water use facilities

Parcel 81a - (0.03 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel represents an area where the appropriate rights for private water use facilities do not exist. This parcel has a Medium probability for the presence of undisturbed cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-81a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	28
Stream Mile and Bank	TRM 491.9L
Land Use/Land Cover	Hardwood forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 82 - (4.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This is a small parcel is located along the right descending bank of the Tennessee River. The current land cover is mature upland hardwood with some red cedar along the shoreline. While small in size, this tract still offers important habitat to upland wildlife, along with visual protection from the reservoir. This parcel has a medium probability for the presence of cultural resources but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-82. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	28
Stream Mile and Bank	TRM 490.6R
Land Use/Land Cover	Upland hardwoods and red cedars
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 83 - (9.6 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Eagle Roost HPA due to the excellent wintering habitat for bald eagle. This small wooded parcel is located on a highly visible steep bluff along the right descending bank of the Tennessee River. The land cover is predominantly upland hardwoods with some pine and red cedar scattered. Storms have recently impacted a portion of the trees on the southern end of this parcel. This parcel has a moderate probability for the presence of cultural resources, but the area has not been surveyed. It is adjacent to a small historic cemetery on private land. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-83. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	31
Stream Mile and Bank	TRM 492.4R
Land Use/Land Cover	Upland hardwood forest
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties • Implementation of natural areas management plan
Potential Partners	None identified

Parcel 84 - (1.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This is a small parcel on the corner of a small embayment and the Tennessee River. The land cover is mature upland hardwood with an east facing aspect. While small in size, this parcel still offers important habitat to upland wildlife, along with visual protection from the reservoir. It is also the northern portion of Hobo Bluff. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-84. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	31
Stream Mile and Bank	TRM 493.4R
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 85 - (14.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River. This parcel lies entirely below either the 690-foot msl contour or the 685.44-foot msl contour, depending on the location. Regatta Point and Chickamauga Shores subdivisions are located on the back-lying private property. The current land cover is mixed pine and hardwood forest with maintained lawns. This parcel has a medium probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-85. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	31 and 36
Stream Mile and Bank	TRM 493.5 to 495R
Land Use/Land Cover	Mixed pine and hardwood forest with maintained lawns
Fronts Former TVA Tract(s)	XCR–130, XCR–131,and XCR–478
Structure Profile	Various
Current Agreements/Commitments	Approved water use facilities

Parcel 85a - (0.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel represents an area where the appropriate rights for private water use facilities do not exist. This parcel has a low probability for the presence of undisturbed cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-85a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	36
Stream Mile and Bank	TRM 495R
Land Use/Land Cover	Mixed hardwood and open shoreline

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 86 - (5.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

The eastern portion parcel of this shoreline parcel fronts former TVA property (XCR-131). This section of the parcel has been developed as part of Sale Creek Marina and includes boat slips and fuel services.

The western portion of this parcel (TVA monuments 506-3 to 506-4) is adjacent to former TVA property (XTCR-15) transferred to the state of Tennessee for public recreation. A boat-launching ramp has been developed at this location.

The parcel in its entirety is located below the 609-foot msl contour and accessible via Lee Pike. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-86. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	36
Stream Mile and Bank	TRM 495R

Parcel 87 - (0.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for Lee Pike. While a portion of the parcel is located adjacent to former TVA property (XTCR-15) which was transferred to the state of Tennessee for public recreation purposes, the intent of this parcel is support the road ROWs. This parcel has a low probability for the presence of cultural resources. In locations where the road ROWs and public recreation are complementary, requests to support the adjacent public recreation would be considered. However, requests for private water use facilities would not be considered.

Table 4-87. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D–Stage Map Numbers	36
Stream Mile and Bank	Sale Creek Mile 0.4R TRM 495R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Revocable license to the state of Tennessee for public recreation
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 88 - (0.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tract of land located along the right descending bank of Sale Creek. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily deciduous forest and maintained lawns. The northern portion of this parcel has a low probability for the presence of cultural resources. The southern portion has a medium probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-88. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	35 and 36
Stream Mile and Bank	Sale Creek Miles 0.5 to 1.5R
Land Use/Land Cover	Deciduous forest maintained lawns
Fronts Former TVA Tract(s)	XCR–132 and XCR–133
Structure Profile	690-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 89 - (47.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of five noncontiguous tracts of land located near the confluence of Sale Creek and the Tennessee River. The parcel contains average and above average pine and upland hardwood sawtimber. Storms have impacted much of the parcel leaving many pines and hardwoods the ground or scattered throughout the remaining standing trees. The parcel offers important habitat to upland wildlife, along with visual protection from the reservoir. There are two caves on this parcel as well.

This parcel is in the general area of the historic Cherokee Sale Creek Town. It has not been surveyed for cultural resources. It has a medium probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-89. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	36
Stream Mile and Bank	Sale Creek Miles 0-1.5 L & R
Land Use/Land Cover	Upland hardwoods and pines
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 90 - (4.5 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses four noncontiguous tracts of land and contains a portion of the ROW for May Road. While portions of the parcel are located adjacent to TVA property allocated for other purposes, the intent of this parcel is support the road ROWs. In locations where the road ROWs and public recreation are complementary, requests to support the adjacent public

recreation would be considered. However, requests for private water use facilities would not be considered. This parcel has a low probability for the presence of cultural resources.

Table 4-90. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D–Stage Map Numbers	36
Stream Mile and Bank	Sale Creek Miles 1–1.6L TRM 495R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easement to Tennessee Department of Transportation for a roadway • Term lease for Sale Creek Recreation Area
Potential Projects	None identified
Potential Partners	State of Tennessee Sale Creek Recreation Area

Parcel 91 - (100.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel extends along both banks of Sale Creek upstream of May Road bridge. The back-lying land adjacent to this parcel includes former TVA properties (XTCR-13, XTCR-14, XTCR-16, XTCR-68, XTCR-71, and XTCR-72) that were transferred to the state of Tennessee for public recreation. The land is mostly wooded and steep and road access is limited. A boat-launching ramp has been developed on the right bank of Sale Creek near Mayflower Road. The remainder of the parcel is undeveloped.

The steep marginal strip that makes up this parcel has a low to medium probability for the presence of cultural resources. The larger more level portions of this parcel have a high probability for the presence of cultural resources. This parcel has not been adequately surveyed for cultural resources. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-91. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	35 and 36
Stream Mile and Bank	TRM 495R

Parcel 92 - (121.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is located along the right descending bank of Sale Creek and below the 690-foot msl contour. The parcel is adjacent to former TVA property (XTCR-69) transferred to the state of Tennessee for wildlife management. Currently, the parcel is managed by TWRA. While some agriculture activities are conducted by TWRA on the upland areas, the remaining portions are high-quality forested, scrub-shrub, and emergent wetlands. The wetlands and agricultural crops provide very high quality habitat for waterfowl, shorebirds, and other wetland species of plants and animals. This parcel has a high probability for the presence of cultural resources. Only a small portion of the parcel has been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-92. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D-Stage Map Numbers	41
Stream Mile and Bank	Sale Creek Mile 3.5B
Land Use/Land Cover	Agricultural fields, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Wildlife enhancement
Current Agreements/Commitments	Revocable license to the state of Tennessee for wildlife management
Potential Projects	Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 93 - (2.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses three noncontiguous tracts of land and contains a portion of the ROW for Daugherty Ferry Road. While a portion of the parcel is located adjacent to former TVA property (XTCR-16) which was transferred to the state of Tennessee for public recreation purposes, the intent of this parcel is support the road ROWs. In locations where the road ROWs and public recreation are complementary, requests to support the adjacent public recreation

would be considered. However, requests for private water use facilities would not be considered.

The road within this parcel has a low probability for the presence of cultural resources. Portions of the ROW have a medium probability of the presence of cultural resources. None of the parcel has been surveyed.

Table 4-93. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D–Stage Map Numbers	41
Stream Mile and Bank	Sale Creek Miles 4.4–4.8B TRM 495R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easement to Tennessee Department of Transportation for a roadway • Revocable license to the state of Tennessee for public recreation • Revocable license to the Chattanooga Electric Power Board for electric utilities
Potential Projects	None identified
Potential Partners	• State of Tennessee • Chattanooga Electric Power Board

---

Parcel 94 - (13.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses three noncontiguous tracts of land and contains a portion of the ROW for U.S. 27. This parcel has a low probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-94. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D–Stage Map Numbers	41 and 46
Stream Mile and Bank	Sale Creek Miles 5.7–7B TRM 495R
Land Use/Land Cover	Road right–of–way

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easement to the state of Tennessee for a roadway • Revocable license to the Chattanooga Electric Power Board for electric utilities and TLs • Revocable license to the state of Tennessee for a roadway
Potential Projects	None identified
Potential Partners	• State of Tennessee • Chattanooga Electric Power Board

Parcel 95 - (109.0 acres)

Zone 4, Natural Resource Conservation

This parcel is a mixture of deciduous forest and agricultural fields. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-95. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D-Stage Map Numbers	41 and 46
Stream Mile and Bank	Sale Creek Miles 5.5-6.6 L & R
Land Use/Land Cover	Agricultural fields, upland and bottomland hardwoods, and wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Term agricultural license to a private individual for hay production
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 96 - (5.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of Sale Creek. This parcel lies entirely below the 685.44-foot contour between TVA monuments 41-1 and 41-2. The current land cover is primarily mixed pine and hardwood forest. The very steep portions of this parcel have a low probability for the presence of cultural resources. The other portions have a medium to high probability for the presence of cultural resources. This parcel has not been adequately surveyed. Requests for private water use facilities would be considered.

Table 4-96. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D-Stage Map Numbers	41
Stream Mile and Bank	Sale Creek Mile 5L
Land Use/Land Cover	Mixed pine and hardwood forest
Fronts Former TVA Tract(s)	XCR–134
Structure Profile	690-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 97 - (55.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

At one time, this parcel was mixed pine and upland hardwoods. However, southern pine beetle infestations over the recent decade have removed most of the pine trees. Topography is moderately steep but not restrictive to forest management. However, access is the limiting factor, both for public and TVA access. The aspect is mainly southern exposure, and some slopes facing the southeast. The portion of this parcel east of the slough has unauthorized vegetation removal and a roadway. Access to the parcel occurs mainly by boat with the main use being hunting of upland wildlife.

This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-97. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D-Stage Map Numbers	42
Stream Mile and Bank	Sale Creek Mile 2L
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Hunting, fishing, and informal hiking
Current Agreements/Commitments	None identified
Potential Projects	• Continued efforts to eliminate unauthorized use • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 98 - (47.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel includes the Sale Creek Recreation Area and shoreline adjacent to former TVA property (XTCR-73) transferred to the state of Tennessee for public recreation. Originally developed by TVA, Sale Creek Recreation Area is currently managed via lease agreement for commercial recreation, and amenities include a boat-launching ramp, swimming beach, and a campground. The remainder of this parcel (from TVA monuments 516-5 to 516-9) is currently undeveloped. The parcel is accessible from May Road. The portions of this parcel that have not been extensively disturbed by development have a high probability for the presence of cultural resources. The parcel has not been adequately surveyed for cultural resources. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-98. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	36
Stream Mile and Bank	TRM 495R

Parcel 99 - (25.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of four non-contiguous tracts of land located along the right descending bank of the Tennessee River. This parcel lies entirely below the 690-foot msl contour. Lakewood Subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood forest along with maintained lawns.

In respect to cultural resources, this long parcel cannot be categorized as a whole. From TRMs 496.5 to 496.8, there is a low probability for the presence of cultural resources. From TRMs 495.1 to 496.45, there is a medium to high probability for the presence of cultural resources. From Sale Creek miles 0.1 to 0.5, there is a medium probability of the presence of cultural resources. The end of this parcel at approximately Sale Creek 0.5 mile is adjacent to a historic cemetery.

Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-99. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE and 111–SE
TVA D-Stage Map Numbers	36 and 42
Stream Mile and Bank	TRMs 495 to 496.8R
Land Use/Land Cover	Mixed pine and hardwood forest and maintained lawns
Fronts Former TVA Tract(s)	XCR–135, XCR–446, XCR–563, XCR–565, XCR–566, XCR–567, XCR–568, XCR–569, XCR–570, XCR–571, XCR–572, and XCR–573
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 99a - (0.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel represents an area where the appropriate rights for private water use facilities do not exist. This parcel has a medium probability for the presence of undisturbed cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-99a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D-Stage Map Numbers	36
Stream Mile and Bank	TRM 496.8R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 100 - (0.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This small shoreline parcel is located entirely below the 690-foot msl contour and adjacent to former TVA property (XTCR-74) transferred to the state of Tennessee for public recreation. The property is accessible from Daugherty Ferry Road and is currently undeveloped. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-100. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	42
Stream Mile and Bank	TRM 496.8R

Parcel 101 - (5.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This narrow parcel is located along the right descending bank of the Tennessee River. The land cover is mainly composed of pine and upland hardwood with an eastern aspect. There are some small rock bluffs on the parcel along with a rock shelf at waterline. With adjacent development pressures, there have been unauthorized vegetation removal and potential structural encroachments along the boundary of this parcel. This parcel has a medium probability for the presence of cultural resources. Existing previously approved private water use facilities would be allowed to remain; however, requests for new private water use facilities would not be considered.

Table 4-101. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D-Stage Map Numbers	42
Stream Mile and Bank	TRM 497.2R
Land Use/Land Cover	Upland hardwoods and pines
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Continued efforts to eliminate unauthorized clearing and unauthorized structures • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 102 - (26.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River. This parcel lies entirely below either the 685.44-foot msl contour or the 690-foot msl contour, depending on the location, and stretches between TVA monuments 42-5 and 47-3. Cooper Subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood forest along with maintained lawns. Most of this parcel has a low to medium probability for the presence of cultural resources. There are wider portions that have a medium to high probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-102. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton and Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D-Stage Map Numbers	42 and 47
Stream Mile and Bank	TRM 497.4 to 499R
Land Use/Land Cover	Mixed pine and hardwood forest and maintained lawns
Fronts Former TVA Tract(s)	XCR–136, XCR–137, XCR–138, XCR–486,and XCR–487
Structure Profile	Varies

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	Approved water use facilities

Parcel 102a - (0.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel represents an area where the appropriate rights for private water use facilities do not exist. This parcel has a medium probability for the presence of undisturbed cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-99a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D-Stage Map Numbers	42
Stream Mile and Bank	TRM 498.3R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 103 - (108.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the right descending bank of the Tennessee River and the north side of Aslinger Hollow. The parcel is mostly forested with upland hardwoods. In the early 2000's, a significant amount of pine trees were harvested due to the pine beetle infestations. The western portion of the parcel receives some dispersed recreational use, namely hunting. Historically, unauthorized vegetation management has occurred on the eastern end of this parcel. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Existing previously approved private water use facilities would be allowed to remain; however, requests for new private water use facilities would not be considered.

Table 4-103. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton and Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D-Stage Map Numbers	47
Stream Mile and Bank	TRM 499R
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Hunting and fishing
Current Agreements/Commitments	None identified
Potential Projects	• Continued efforts to eliminate unauthorized vegetation removal • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 104 - (11.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses two noncontiguous tracts of land and contains a portion of the ROW for SR-60. This parcel has a low probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-104. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs and Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D–Stage Map Numbers	43 and 47
Stream Mile and Bank	TRM 499B
Land Use/Land Cover	Deciduous forest and road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easement to the state of Tennessee for a roadway • Revocable license to the state of Tennessee for a roadway
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 105 - (1.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This small parcel is located entirely below the 690-foot msl contour and adjacent to former TVA property (XTCR-18) transferred to the state of Tennessee for public recreation. The area was formerly used as a landing for Blythe Ferry. A boat-launching ramp has been developed on this parcel under a partnership agreement between Rhea County and the state of Tennessee. This parcel has a low probability for the presence of cultural resources. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-105. Parcel Information

Location Component	Parcel Specific Information
County, State	Rhea, Tennessee
TVA D−Stage Map Numbers	47
Stream Mile and Bank	TRM 499.5R

Parcel 106 - (18.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the right descending bank of the Tennessee River. Twin River Estates subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns.

The southern portion of this parcel has a high probability for the presence of cultural resources. The northern portion of this parcel has a medium probability for the presence of cultural resources. Only a portion of this parcel has been surveyed for cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-106. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE and119–NW
TVA D-Stage Map Numbers	48 and 51
Stream Mile and Bank	TRM 500.5R

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–140, XCR–141, XCR–142,and XCR–143
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 107 - (3.4 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This is a small highly visible parcel immediately across from Hiwassee Island and the confluence of the Hiwassee River. The land cover is predominantly upland hardwood. This parcel has a high probability for the presence of cultural resources, but it has not been adequately surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-107. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs and Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D-Stage Map Numbers	48
Stream Mile and Bank	TRM 500.4R
Land Use/Land Cover	Upland hardwood forest
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 108 - (275.7 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel, Hiwassee Island, is under permanent easement to TWRA for waterfowl management within the Hiwassee Refuge. Predominant land use on the island is agriculture, where grain crops are raised solely for the consumption of waterfowl. Soils are high quality and productivity of grain is consistent. The island contains many sloughs which results in more

shoreline conditions. This shoreline is dominated by bottomland hardwoods with some small stands of pine. Most of the trees on the navigation channel side of the island were planted by TVA and TWRA as experimental plantings, and tree species are varied. The island has regularly supported a bald eagle nest, as well as whitetail deer, wild turkey and many other species of wildlife thriving in habitat consisting of agriculture, woodlands, shallow-water sloughs, and the multitude of aquatic, emergent and scrub-shrub wetlands that surround the island.

This parcel has a high probability for the presence of cultural resources. Hiwassee Island has been determined very sensitive. The cultural resources in this parcel are being nominated for listing on the NRHP. No earth disturbing activities, including agricultural practices, should take place without prior review by TVA's cultural resources staff. Federal, state and local law enforcement agencies have place this parcel under multiple methods of observation to address serious illegal looting. Absolutely no excavations may take place without a permit under the Archaeological Resource Protection Act (ARPA) issued only by TVA. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-108. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW and 111–NE
TVA D-Stage Map Numbers	48 and 47
Stream Mile and Bank	TRMs 499.1-501L
Land Use/Land Cover	Bottomland hardwoods, agricultural fields, and pine stands
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	Permanent easement to Tennessee Wildlife Resources Agency for Hiwassee Refuge
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Placement on the National Register of Historic Places • Continue efforts to eliminate illegal looting • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 109 - (7.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is a small narrow shoreline strip fronting a former TVA property (XTCR-161) transferred to the state of Tennessee for wildlife management. The land cover is predominantly upland hardwood and pine with some red cedar. On the northern portion of the parcel, there are some small fields maintained in early-successional habitat for wildlife. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-109. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE and 119–NW
TVA D-Stage Map Numbers	51
Stream Mile and Bank	TRM 501R
Land Use/Land Cover	Upland hardwoods, pines, and red cedars
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to the state of Tennessee for wildlife management
Potential Projects	Systematic survey for historic properties
Potential Partners	State of Tennessee

Parcel 110 - (21.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the right descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour or the 690-foot msl contour depending on location. Sertoma Hills subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. The portion of this parcel around Tennessee River mil 503 has a medium probability for the presence of cultural resources, but it has not been surveyed. The southern portion of this parcel has a high probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-110. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE and 119–NW
TVA D-Stage Map Numbers	51
Stream Mile and Bank	TRM 501.3 – 503.1R
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–144, XCR–145, XCR–146, and XCR–488
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 111 - (4.1 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

While technically several small islands, this parcel is more of a long peninsula comprised of bottomland hardwoods, privet understory, emergent wetlands along the western shore, and aquatic bed wetlands. The parcel contributes good habitat to the nearby Hiwassee Refuge. This parcel has a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-111. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs and Rhea Counties, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	51
Stream Mile and Bank	TRM 502R
Land Use/Land Cover	Bottomland hardwoods and emergent wetlands
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	None identified

Parcel 112 - (8.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located below the 690-foot msl contour and adjacent former TVA property (XTCR-19 and XTCR-78) transferred to the state of Tennessee for public recreation. The parcel is accessible via Garrison Road, and a boat-launching ramp has been developed. The undeveloped portion of this parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-112. Parcel Information

Location Component	Parcel Specific Information
County, State	Rhea, Tennessee
TVA D−Stage Map Numbers	51
Stream Mile and Bank	TRM 502.8R

Parcel 113 - (6.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located below the 690-foot msl contour and adjacent former TVA property (XCR-489 and XCR-490) that does not have the necessary rights for water use facilities. This parcel has a low probability for the presence of cultural resources. Existing previously approved private water use facilities would be allowed to remain; however, requests for new private water use facilities would not be considered.

Table 4-113. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs and Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	51 and 54
Stream Mile and Bank	TRMs 503-504R
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	None identified

Parcel 114 - (0.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located at the old Armstrong Ferry landing (right descending bank) and is adjacent to former TVA property (XTCR-20 and XTCR-79) transferred to the state of Tennessee for public recreation. Armstrong Ferry Road provides access to this parcel. The site is currently undeveloped. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-114. Parcel Information

Location Component	Parcel Specific Information
County, State	Rhea, Tennessee
TVA D−Stage Map Numbers	54
Stream Mile and Bank	TRM 503.7R

Parcel 115 - (0.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located upstream of the abandoned Armstrong Ferry site and encompasses a safety landing. Safety landings are available for barges and recreational boats during adverse weather conditions or equipment malfunction. Future development of this tract would be restricted to support navigational purposes. This parcel has a low probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-115. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119−NW
TVA D-Stage Map Numbers	54
Stream Mile and Bank	TRM 504R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 116 - (3.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour between TVA monuments 54–3 and 54–1. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been adequately surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-116. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	54 and 55
Stream Mile and Bank	TRM 504.1R
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–148
Structure Profile	690-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 117 - (13.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the right descending bank of Richland Creek adjacent former TVA property that does not have the necessary rights for water use facilities. Portions of this parcel have a medium probability for the presence of cultural resources. Very steep portions of this parcel have a low probability for the presence of cultural resources. This parcel has not been surveyed. No existing private water use facilities are present, and future requests for private water use facilities would not be considered.

Table 4-117. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	54 and 55
Stream Mile and Bank	Richland Creek Miles 0 to 1.7R

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Mixed Hardwoods and pines
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 118 - (7.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Richland Creek and lies entirely below the 690 foot msl contour. Edgewater Estates subdivision is located on the back-lying private land. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-118. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE and 119–NW
TVA D-Stage Map Numbers	54 and 103
Stream Mile and Bank	Richland Creek Mile 2.7R
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–527, XCR–528, and XCR–529
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 119 - (37.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is varied and contains many small tracts in and around the Town of Dayton.

A portion of the parcel is a narrow strip of shoreline adjacent former TVA property that does not have the necessary rights for water use facilities. This narrow portion is located across from the park in Dayton, Tennessee.

Another portion of the parcel is on the north side of Richland Creek, and this small block of land is also adjacent to U.S. Highway 27. The land cover is mixed hardwood and some pine. Finally, there are numerous small tracts within the city of Dayton ranging from open fields to wooded tracts, with many encumbered by easements. Some agricultural occurs, but many are simply maintained as open by the city.

Most of this parcel has a medium probability for the presence of cultural resources. A few highly disturbed areas have a low probability for the presence of cultural resources. Only a portion of this parcel has been surveyed. No existing private water use facilities are present, and future requests for private water use facilities would not be considered.

Table 4-119. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	110–SE and 111–NE
TVA D-Stage Map Numbers	54, 58, 101, 104, and105,
Stream Mile and Bank	Richland Creek Mile 3 L & R
Land Use/Land Cover	Mixed hardwoods, pines, and open fields
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	City of Dayton, Tennessee

Parcel 120 - (51.8 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses numerous noncontiguous tracts of land within the city of Dayton, Tennessee. This parcel represents the road ROWs within the city and located on TVA property. While a portion of the parcel is located is encumbered with agreements for other uses such as public recreation, the intent of this parcel is support the road ROWs. In locations where the road ROWs and other uses are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered. Due to extensive ground disturbance this parcel has a low probability for the presence of cultural resources.

Table 4-120. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	110–SE, 111–NE, and 119–NW
TVA D–Stage Map Numbers	54, 58, 101, 102, 103, 104, and 105
Stream Mile and Bank	Richland Creek 2.3 to 3B TRM 504.4R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Potential Projects	None identified
Potential Partners	City of Dayton, Tennessee Rhea County, Tennessee State of Tennessee

Parcel 121 - (92.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel encompasses property managed by the city of Dayton as a part of Dayton City Park and Dayton Boat Dock. City Park facilities include sports complex, paved trails, picnic facilities and restrooms. Facilities at Dayton Boat Dock include boat slips, fishing pier, and a boat-launching ramp. This parcel is operated by the City under a recreation easement (XTCR-199RE). The Park is located adjacent to US Highway 27.

Undeveloped portions of this parcel have a high probability for the presence of cultural resources. Developed portions of this parcel have a low to medium probability for the presence of cultural resources. Some portions of this parcel have been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-121. Parcel Information

Location Component	Parcel Specific Information
County, State	Rhea, Tennessee
TVA D−Stage Map Numbers	54
Stream Mile and Bank	TRM 504.4R

Parcel 122 - (9.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Richland Creek. This parcel lies entirely below the 690-foot msl contour. Piney Acres, Pine Hollow, and Pine Ridge subdivisions are located on the back-lying private land. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-122. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	54 and 58
Stream Mile and Bank	Richland Creek Mile 2.4L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–532, XCR–533, XCR–534, XCR–535, XCR–536, XCR–537, and XCR–538
Structure Profile	694–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 123 - (3.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This narrow parcel is location along the left descending bank of Richland Creek. A portion of the parcel is located adjacent to former TVA property that does not have the necessary rights for water use facilities. The land cover is mixed hardwood and some pine. There is a potential encroachment from the neighboring campground operation. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed.

Table 4-123. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	54
Stream Mile and Bank	Richland Creek Mile 0.7L
Land Use/Land Cover	Upland hardwoods and pine

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 124 - (2.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is encumbered by a revocable license agreement for Blue Water Campground and Boat Dock. Amenities at this commercial recreation area include a campground, rental cabins, a boat-launching ramp, and fuel services. Shaver Loop Road provides access to the area. Developed portions of this parcel have a low probability for the presence of cultural resources. Undeveloped portions of this parcel have a medium probability for the presence of cultural resources. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-124. Parcel Information

Location Component	Parcel Specific Information
County, State	Rhea, Tennessee
TVA D−Stage Map Numbers	55
Stream Mile and Bank	TRM 504.4R

Parcel 125 - (18.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of five non-contiguous tracts of land located along the left descending bank of Richland Creek. This parcel lies entirely below the 690-foot msl contour. Greenbriar Lake Estates subdivision is located on the back-lying private land. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-125. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	54 and 55
Stream Mile and Bank	Richland Creek Mile 0.4L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–160 and XCR–539
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 125a - (3.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel represents an area where the appropriate rights for private water use facilities do not exist. The land cover is mixed hardwood, bottomland hardwood, and borders the shoreline adjacent to high-quality wetlands, both emergent/scrub-shrub and aquatic bed. This parcel has a low probability for the presence of undisturbed cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-125a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	55
Stream Mile and Bank	Richland Creek Mile 0.4L
Land Use/Land Cover	Mixed hardwoods, bottomland hardwoods, and emergence wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 126 - (59.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located between Richland Creek and Mud Creek along the right descending bank of the Tennessee River. It is a wooded tract with large mast producing trees along the shoreline. The adjacent sloughs have both emergent and aquatic bed wetlands present. This area provides good reproduction, resting, and feeding sites for waterfowl and aquatic mammals, and good feeding and nesting sites for shorebirds. Approximately two thirds of the parcel is under license to TWRA as a wildlife management area, with that area used for agricultural crops. This parcel is within TVA's Upper Chickamauga Unit Management Plan. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-126. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	55
Stream Mile and Bank	TRM 504.7R
Land Use/Land Cover	Upland Hardwoods and agricultural fields
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resource Agency

Parcel 127 - (3.7 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is a string of barrier-type islands totaling approximately one mile in length. The soils are rich and where accessible, are considered 100 percent prime farmland. Many of these islands are covered with heavy understories and bottomland hardwoods, and form numerous sloughs and inlets containing emergent and aquatic bed wetlands. These islands are adjacent

to a revocable license agreement to TWRA for the Chickamauga WMA. The parcel is scenic and well isolated and receives heavy use by waterfowl hunters. This parcel has a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-127. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs and Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	54 and 55
Stream Mile and Bank	TRM 504.5R
Land Use/Land Cover	Bottomland hardwood and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, fishing, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resource Agency

Parcel 128 - (53.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is an almost continuous string of barrier-type islands totaling approximately five miles in length. Soils are rich and where accessible, are considered 100 percent prime farmland. Many of these islands are covered with heavy understories and bottomland hardwoods, and form numerous sloughs and inlets containing emergent and aquatic bed wetlands. Most of the islands are under a revocable license agreement to TWRA for the Chickamauga WMA. The parcel is scenic and well isolated and receives heavy use by waterfowl hunters. This parcel is within TVA's Upper Chickamauga Unit Management Plan. This parcel has a high probability for the presence of cultural resources. Only portions of this series of islands have been surveyed.

Table 4-128. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs and Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	52, 53, and 55
Stream Mile and Bank	TRM 505-510R

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Upland hardwoods, bottomland hardwoods and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, fishing, and primitive camping
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 129 - (4.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the right descending bank of Rattan Creek and Mud Creek. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a high probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-129. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	55
Stream Mile and Bank	Rattan Creek mile 0.5R and Mud Creek Mile 0.5R
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–162, XCR–163, and XCR–165
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 130 - (9.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is adjacent to former TVA property (XTCR-23) transferred to the state of Tennessee for public recreation. Amenities include two boat-launching ramps, and the area is accessible via Double S Road. This parcel has a medium probability for the presence of cultural

resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-130. Parcel Information

Location Component	Parcel Specific Information
County, State	Rhea, Tennessee
TVA D−Stage Map Numbers	55
Stream Mile and Bank	TRM 505.5R

Parcel 131 - (3.8 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses four noncontiguous tracts of land and contains portions of the ROWs for New Union Road, Double S Road, Rattan Road, and Fisher Road. While a portion of the parcel is located adjacent to former TVA property (XTCR-23) which was transferred to the state of Tennessee for public recreation purposes, the intent of this parcel is support the road ROWs. In locations where the road ROWs and public recreation are complementary, requests to support the adjacent public recreation would be considered. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. However, requests for private water use facilities would not be considered.

Table 4-131. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D–Stage Map Numbers	55
Stream Mile and Bank	Rattan Creek Mile 0.4B Mud Creek Mile 2.5B TRM 505.4R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easement to the state of Tennessee for a roadway • Revocable license to the state of Tennessee for public recreation • Revocable licenses to the city of Dayton, Tennessee, for electric and water utilities • Revocable license to Rhea County, Tennessee for hiking trails and a park
Potential Projects	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Partners	• City of Dayton, Tennessee • Rhea County, Tennessee • State of Tennessee

Parcel 132 - (54.8 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is in the upper end of Rattan Creek. The parcel is approximately 85 percent prime farmland and has historically been licensed for that use. However, there is no current active agricultural license on this parcel, and the adjacent landowner is not interested. However, the TVA property has continued to be farmed and TVA has taken steps to stop the use and will continue to monitor activity. The unique feature of this parcel is the open fields, the large trees (bottomland and upland hardwoods), and the high-quality emergent, scrub-shrub, and aquatic bed wetlands surrounding this parcel. It is therefore a high-quality area for wildlife, primarily waterfowl and wetland-related mammals. This parcel is within TVA's Upper Chickamauga Unit Management Plan. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-132. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	55
Stream Mile and Bank	Mud Creek Mile 1.4 L & R
Land Use/Land Cover	Bottomland and upland hardwoods, open field, and emergent scrub-shrub and aquatic bed wetlands
Known Dispersed Recreation Opportunities	Hunting, primitive camping, and wildlife observation
Current Agreements/Commitments	None Identified
Potential Projects	• Continue efforts to stop unauthorized farming • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 133 - (67.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of four non-contiguous tracts of land located along the right descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. Lakeview Estates, Sunset Lake Estates, Vaughn Farm Estates, and Riverbend Estates subdivisions are located on the back-lying private property. The current land use is primarily mixed pine and hardwood trees with maintained lawns. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-133. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	52 and 55
Stream Mile and Bank	TRM 505.2R
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–166, XCR–167, XCR–168, XCR–169, XCR–170, XCR–171, XCR–172, XCR–173, and XCR–175
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 134 - (11.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is in the upper end of Brown Branch and is dominated by bottomland hardwoods, along with high-quality wetlands to include emergent, scrub-shrub and aquatic bed. There has been unauthorized vegetation removal along the western boundary. This parcel is within TVA's Upper Chickamauga Unit Management Plan. Portions of this parcel have a medium probability for the presence of cultural resources. Other portions appear to be disturbed by encroachments. None of this parcel has been surveyed. Requests for private water use facilities would not be considered.

Table 4-134. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	55
Stream Mile and Bank	Mud Creek Mile 2.5R
Land Use/Land Cover	Bottomland hardwoods and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Continue efforts to eliminate encroachments on this tract • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 135 - (5.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Mud Creek. Amenities include a boat-launching ramp, and the area is accessible via New Union Road. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-135. Parcel Information

Location Component	Parcel Specific Information
County, State	Rhea, Tennessee
TVA D−Stage Map Numbers	55
Stream Mile and Bank	TRM 505.5R

Parcel 136 - (6.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is on the left bank of Mud Creek embayment. The land cover is mixed hardwood. The tract borders agricultural fields, and a TVA boat-launching ramp to the west, with the access road to the ramp running adjacent to this parcel. This parcel is within TVA's Upper Chickamauga Unit Management Plan. This parcel has a medium probability for the presence of

cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-136. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	55
Stream Mile and Bank	TRM 505R
Land Use/Land Cover	Mixed hardwoods
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 137 - (206.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is composed of multiple noncontiguous tracts of land along locally-known Gillespie Bend (TRM 505.5 to 508L), including Gillespie Slough and Early Slough. These parcels are currently licensed to TWRA as part of the Chickamauga WMA system. Agricultural fields interspersed with wetland sloughs and mature hardwood trees combine to produce excellent capability for reproduction, feeding, and resting habitat for waterfowl, wetland and upland wildlife species. Approximately 60 percent of the tract is considered prime farmland. TWRA oversees the management of crops for wildlife. The entire parcel receives heavy public use from small game and waterfowl hunters. Wildlife habitat is excellent. At one time, this parcel supported significant large sawtimber pines; these trees were harvested in the late 1990's due to southern pine beetle infestations. Scattered individual and small stands of pine remain a component of the forest canopy on this parcel. This parcel is within TVA's Upper Chickamauga Unit Management Plan.

This parcel has a high probability for the presence of cultural resources, but only a portion has been surveyed. There is one known historic cemetery present in this parcel. Requests for private water use facilities would not be considered.

Table 4-137. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	52, 53, and 55
Stream Mile and Bank	TRMs 505.5 to 508R
Land Use/Land Cover	Agricultural fields, upland hardwoods and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and fishing
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for wildlife management
Potential Projects	Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 138 - (7.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the right descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood forest with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been adequately surveyed. Requests for private water use facilities would be considered.

Table 4-138. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	52 and 55
Stream Mile and Bank	TRM 506R
Land Use/Land Cover	Mixed pine and hardwood forest with maintained lawns
Fronts Former TVA Tract(s)	XCR–176
Structure Profile	695–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 139 - (8.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of five non-contiguous tracts of land located along the right descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees. A portion of this parcel is managed under a revocable license to TWRA for a WMA. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-139. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	52
Stream Mile and Bank	TRM 507R
Land Use/Land Cover	Mixed pine and hardwood
Fronts Former TVA Tract(s)	XCR–177 and XCR–178
Structure Profile	Varies
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area

Parcel 140 - (150.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is large and isolated and exhibits excellent capability for forest and wildlife management. Abundant aquatic bed wetlands and large riparian hardwoods are present within the two large coves which bisect the tract. These areas provide excellent nesting and brood rearing habitat for resident wood ducks, as well as mammals and shorebirds. The land cover is currently upland hardwoods, with some scattered pine. The parcel once supported a healthy component of shortleaf pine; these trees were naturally removed from the stand around 2001 due to southern pine beetle infestations. No salvage operations were conducted due to the adjacent property access. The adjacent property was once owned by Bowater Inc., a local paper company, but is now privately owned. However, TVA has maintained the boundary, and the parcel receives good use from the public accessing by boat. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a medium to high probability for

the presence of cultural resources, but it has not been adequately surveyed. There is a known homestead and historic cemetery within this parcel. Requests for private water use facilities would not be considered.

Table 4-140. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	53
Stream Mile and Bank	TRMs 508 to 509R
Land Use/Land Cover	Upland hardwood forest and pines
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 141 - (6.5 acres)

Zone 7, Shoreline

This parcel consists of two non-contiguous tracts of land located along the right descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-141. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	53
Stream Mile and Bank	TRM 509.5R
Land Use/Land Cover	Mixed pine and hardwood
Fronts Former TVA Tract(s)	XCR–179 and XCR–180
Structure Profile	Varies
Current Agreements/Commitments	None Identified

Parcel 142 - (27.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the right descending bank of the Tennessee River. It is currently under license to TWRA as a part of the Chickamauga WMA system. The tract consists of two sloughs and two peninsulas of agricultural lands. The shorelines are wooded, with aquatic bed and emergent wetland plants present in the sloughs. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a medium probability for the presence of cultural resources. Only a small portion has been surveyed. Requests for private water use facilities would not be considered.

Table 4-142. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	53
Stream Mile and Bank	TRM 510.2R
Land Use/Land Cover	Upland hardwoods, agricultural fields, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, fishing, and wildlife observation
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for wildlife management
Potential Projects	Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 143 - (1.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located entirely below the 685.44-foot msl contour and encompasses a safety landing. Safety landings are available for barges and recreational boats during adverse weather conditions or equipment malfunction. Future development of this tract would be restricted to support navigational purposes. This parcel has a low probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-143. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	53
Stream Mile and Bank	TRMs 510.6–9R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 144 - (5.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists one contiguous tract of land located along the right descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees. The northern portion of this parcel has a high probability for the presence of cultural resources. The southern part of this parcel has a low to medium probability for the presence of cultural resources. Water use facilities have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-144. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	53 and 56
Stream Mile and Bank	TRM 511.0R
Land Use/Land Cover	Mixed pine and hardwood
Fronts Former TVA Tract(s)	XCR–180
Structure Profile	Varies
Current Agreements/Commitments	None Identified

Parcel 145 - (61.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is managed under an agricultural license for hay production. It is located on the right bank of Mack Spence Slough on Barley Branch. A large shallow cove lies in the middle of the tract, surrounded by TVA property. The parcel receives some public use and is fairly isolated, with access only by private land or the reservoir. The parcel and offshore aquatic bed wetlands are aesthetically pleasing and the adjoining shallow water areas provide high-quality habitat for shorebirds during drawdown. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a medium probability for the presence of cultural resources. A portion of it has been surveyed, but the rest has not. Requests for private water use facilities would not be considered.

Table 4-145. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	56
Stream Mile and Bank	TRM 511.4R
Land Use/Land Cover	Agricultural fields, upland hardwoods, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	Agricultural license for sod farming
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 146 - (33.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists one contiguous tract of land located along the right descending bank of the Ryans Branch. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been

permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-146. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	55 and 56
Stream Mile and Bank	Ryans Branch 1.3R
Land Use/Land Cover	Mixed pine and hardwood
Fronts Former TVA Tract(s)	XCR–181, XCR–182, and XCR–183
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 147 - (150.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel, locally known as Crawford Branch, is located between Mack Spence Slough and Purser Slough, on Crawford Branch. At one time, TVA licensed this tract for agricultural use; however, the current agricultural use is limited to one small area on the southwest arm of this parcel and two fields on the northeast side. The three central fields (approximately 35 acres in size) are now managed in partnership by TVA and TWRA, and these fields are being converted to Native Warm Season grass (NWSG) species. These grasses existed on the parcel prior to the introduction of exotic grasses, like fescue etc. The NWSGs grow tall while providing an open ground layer compared to other introduced grasses. NWSGs provide excellent escape and nesting cover for mammals and ground nesting birds. The fields are periodically burned by prescribed fire (a natural management option for native grass which evolved around fire). The parcel also provides woodland cover in and around the shoreline and sloughs within the parcel, mostly consisting of bottom-land hardwood species with a few eastern red cedars scattered. The forested sections of this parcel, once comprised of very large upland hardwoods, was damaged by windstorms years ago. However, the storm damage contributed to the woody debris on the forest floor and standing snags and den trees providing additional habitat for upland wildlife. This parcel provides for excellent public use via public road access and a forest road for foot access. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-147. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	56
Stream Mile and Bank	TRM 511.7R
Land Use/Land Cover	Bottomland hardwoods and agricultural fields
Known Dispersed Recreation Opportunities	Hunting, informal hiking, and wildlife observation
Current Agreements/Commitments	Term agricultural license for hay production
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 148 - (21.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the right descending bank of Crawford Branch. This parcel lies entirely below the 685.44-foot msl contour. Shaver subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees and maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-148. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW and 118–SW
TVA D-Stage Map Numbers	56 and 60
Stream Mile and Bank	Crawford Branch 0.8R
Land Use/Land Cover	Mixed pine and hardwood with maintained lawns
Fronts Former TVA Tract(s)	XCR–184, XCR–185, XCR–186, and XCR–187
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 149 - (0.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses three noncontiguous tracts of land and contains a portion of the ROW for Cottonport Road. While a portion of the parcel is located adjacent to former TVA property (XTCR-26) which was transferred to the state of Tennessee for public recreation purposes, the intent of this parcel is support the road ROW. In locations where the road ROW and public recreation are complementary, requests to support the adjacent public recreation would be considered. However, requests for private water use facilities would not be considered. This parcel has a low probability for the presence of cultural resources.

Table 4-149. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SW
TVA D–Stage Map Numbers	60
Stream Mile and Bank	Crawford Branch Mile 1.4B TRM 512R and 517.3R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easement to the state of Tennessee for a roadway • Revocable license to the state of Tennessee for public recreation
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 150 - (0.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of two very small islands in the head of Crawford Branch at Cottonport Road. This parcel is within TVA2000 Upper Chickamauga Unit Management Plan. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-150. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SW
TVA D-Stage Map Numbers	60
Stream Mile and Bank	TRM 512R
Land Use/Land Cover	Bottomland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 151 - (6.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is adjacent to former TVA property (XTCR-26) transferred to the state of Tennessee for public recreation. Cotton Port Road provides access to this parcel which is currently undeveloped. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-151. Parcel Information

Location Component	Parcel Specific Information
County, State	Rhea, Tennessee
TVA D−Stage Map Numbers	56
Stream Mile and Bank	TRM 512.0R

Parcel 152 - (23.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists one contiguous tract of land located along the right descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. Melrose Place subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium to high probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-152. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	56
Stream Mile and Bank	TRM 512.3R
Land Use/Land Cover	Mixed pine and hardwood with maintained lawns
Fronts Former TVA Tract(s)	XCR–188 and XCR–189
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities.

Parcel 153 - (232.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel known as Cottonport Wildlife Management Area, is currently under license with TWRA for wildlife management. The area has a long-standing crop program with approximately 185 acres sharecropped each year for both waterfowl and upland wildlife. Part of the tract consists of a large slough upstream from Crawford Branch and Crooked Branch. The slough contains significant aquatic bed and emergent wetlands. A variety of waterfowl, semi-aquatic mammals, shore birds, and wading birds utilize this area for food, resting, and reproduction. The tract is accessible by vehicle and contains an informal boat-launching ramp. Public use of the tract is high. Forest cover is mainly upland hardwoods with a few scattered pines, along with bottom-land hardwoods along the shorelines. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a high probability for the presence of cultural resources. Portions of this parcel have been surveyed, but not all. Requests for private water use facilities would not be considered.

Table 4-153. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NE and 112–NW
TVA D-Stage Map Numbers	56 and 57
Stream Mile and Bank	TRMs 511.3-513.4R
Land Use/Land Cover	Agricultural fields, upland hardwoods, bottomland hardwoods, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, informal boat launch, and wildlife observation
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for wildlife management
Potential Projects	Systematic survey for historic properties

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 154 - (4.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses two noncontiguous tracts of land and contains a portion of the ROW for Maple Springs Road. The abandoned Cottonport Ferry is adjacent to this parcel. This parcel has a medium probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-154. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D–Stage Map Numbers	56
Stream Mile and Bank	TRM 512.9R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Permanent easement to the state of Tennessee for a roadway
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 155 - (10.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the right descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees with some lawns. This parcel has a high probability for the presence of cultural resources. Water use facilities have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-155. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW and 119–NE
TVA D-Stage Map Numbers	56, 57, and 61
Stream Mile and Bank	TRM 514R
Land Use/Land Cover	Mixed pine and hardwood with maintained lawns
Fronts Former TVA Tract(s)	XCR–190
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 156 - (262.6 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This large tract is located along the right descending bank of the Tennessee River. The parcel is adjacent to Hazel Ridge and the small community of Maple Springs. Approximately 75 percent of the tract is prime farmland and under agricultural management. The tract also supports high quality upland habitat with a combination of cropland, woodlands, sloughs, and early successional areas. This parcel supports moderate to heavy public use, mostly in the form of upland and waterfowl hunting with access is by boat.

This parcel once supported a significant amount of large sawtimber pine; however during the late 1990's and early 2000's, TVA salvaged much of the trees due to southern pine beetle infestations. Hardwoods were left during the salvage operations, and the result has been large mast producing trees with a heavy understory of hardwood and pine providing wildlife with browse, mast and cover. TVA has installed streamside buffers and wildlife habitat improvement. Bald eagles have been observed within this parcel. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a high probability for the presence of cultural resources. Some portions of this parcel have had a surface reconnaissance survey. Most of the parcel has not been adequately surveyed. Requests for private water use facilities would not be considered.

Table 4-156. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NE and 118–SE
TVA D-Stage Map Numbers	61 and 57

Location Component and Public Involvement Opportunities	Parcel Specific Information
Stream Mile and Bank	TRMs 503.7 to 516.4R
Land Use/Land Cover	Agricultural farmland and upland hardwoods
Known Dispersed Recreation Opportunities	Hunting, fishing, wildlife observation and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 157 - (2.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses a safety landing. Safety landings are available for barges and recreational boats during adverse weather conditions or equipment malfunction. Future development of this tract would be restricted to support navigational purposes. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-157. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	61
Stream Mile and Bank	TRM 516R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 158 - (34.4 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This long narrow parcel is located upstream from locally known Gillespie Bend and along the right descending bank of the Tennessee River. Part of the tract is divided by a small slough near Robinson Landing at Lock Light, as well as a small portion on the north end separated by

Washington Creek. Currently, there is a term agricultural license for hay production on portions of the tract. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a high probability for the presence of cultural resources, but most of it has not been adequately surveyed. Requests for private water use facilities would not be considered.

Table 4-158. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs and Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE and 118–SW
TVA D-Stage Map Numbers	60, 61, and 62
Stream Mile and Bank	TRM 517R
Land Use/Land Cover	Agricultural farmland and upland hardwood forest
Known Dispersed Recreation Opportunities	Bank fishing and primitive camping
Current Agreements/Commitments	Term agricultural License for hay production
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 159 - (35.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of four non-contiguous tracts of land located along the right descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. Cottonport Subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources. Only a small portion of this parcel has been surveyed for cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-159. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SW
TVA D-Stage Map Numbers	60 and 62
Stream Mile and Bank	TRM 517.4R
Land Use/Land Cover	Mixed pine and hardwood

Location Component and Public Involvement Opportunities	Parcel Specific Information
Fronts Former TVA Tract(s)	XCR–192, XCR–193, XCR–194, XCR–195, XCR–196, and XCR–197
Structure Profile	701-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 160 - (66.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located on both sides of Washington Creek Embayment and accessible by SR-30 near the Old Washington area. The majority of the parcel topography is flat with mixed hardwoods, bottomland hardwoods, scattered pine, and red cedar. The shoreline and shallow embayment supports high-quality emergent, scrub/shrub and aquatic bed wetlands. The wetlands combined with the forested shores provides for excellent waterfowl and upland wildlife habitat. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a medium to high probability for the presence of cultural resources. Some parts of this parcel have been surveyed, but most has not. Requests for private water use facilities would not be considered.

Table 4-160. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SW
TVA D-Stage Map Numbers	60 and 62
Stream Mile and Bank	TRM 517.7R
Land Use/Land Cover	Scrub/shrub, emergent wetlands and bottomland hardwoods
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 161 - (6.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is situated on the upper end of Town Creek embayment and managed by Rhea County, Tennessee under a term easement (XTCR-195RE). This area, known as Old Washington Park, includes a parking area and a walking trail. The parcel is located off Cotton Port Road. This parcel has a high probability for the presence of cultural resources. At least one historic cemetery is present in the parcel. A portion of this parcel has been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-161. Parcel Information

Location Component	Parcel Specific Information
County, State	Rhea, Tennessee
TVA D−Stage Map Numbers	60
Stream Mile and Bank	TRM 517.3R

Parcel 162 - (62.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of primarily agricultural use, both row-crop and pasture. A nine-acre area along the river channel is managed by TVA and other partners for wildlife habitat improvement. TVA has been reducing the acreage where livestock pasturing is allowed via attrition and volunteers. For existing historic grazing agricultural licenses, TVA has implemented stronger requirements for fencing of sensitive areas. Fencing occurred on this parcel to restrict cattle from the reservoir. Since the fencing has been installed, the adjacent emergent, scrub/shrub and aquatic bed wetlands have flourished. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-162. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SW
TVA D-Stage Map Numbers	62
Stream Mile and Bank	TRM 517.5R
Land Use/Land Cover	Open fields and scrub/shrub wetlands

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Term agricultural license for hay farming
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Agricultural licensees

Parcel 163 - (19.8 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains four noncontiguous tracts of land and a portion of the ROW for SR-30. While a portion of the parcel is encumbered with agreements for public recreation and wildlife management purposes, the intent of this parcel is support the road ROW. In locations where the road ROW and public recreation or wildlife management are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered.

The actual roads have a very low probability for the presence of undisturbed cultural resources. Those portions of the parcel adjacent to bridge have a high probability for the presence of cultural resources.

Table 4-163. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE and 118–SW
TVA D–Stage Map Numbers	62 and 63
Stream Mile and Bank	TRM 517.9R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Permanent easement to Meigs County, Tennessee for a roadway • Permanent easements to the state of Tennessee for roadways • Revocable license to Middle Tennessee Natural Gas Utility District for gas utilities • Revocable license to Rhea County Quail Association for small game habitat • Revocable license to the state of Tennessee for vegetation management
Potential Projects	None identified
Potential Partners	Rhea County, Tennessee

Parcel 163a - (3.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This is under easement for commercial recreation purposes. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-163a. Parcel Information

Location Component	Parcel Specific Information
County, State	Rhea, Tennessee
TVA D−Stage Map Numbers	62 and 63
Stream Mile and Bank	TRM 517.9R

Parcel 164 - (8.8 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This narrow parcel is located entirely below the 685.44-foot msl contour within a tributary embayment to TRM 518. The adjacent land use consists of Rogers Group's Rhea County Stone. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4-164. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SW
TVA D-Stage Map Numbers	62
Stream Mile and Bank	TRM 518R
Land Use/Land Cover	Deciduous forest and maintained lawn
Current Agreements/Commitments	None identified

Parcel 165 - (277.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel stretches over one mile of shoreline and is under a revocable license to TWRA for a WMA. Approximately 200 acres are in cropland and managed for the benefit of waterfowl and upland wildlife. The parcel contains two internal wetland sloughs that are managed as a sub-impoundment, further enhancing the wildlife benefits, especially to waterfowl. TVA and TWRA have and continue to cooperate in a project to manage the emergent vegetation in this and other sub-impoundments, to both maintain and enhance the habitat for a variety of wildlife species. In 2014, TVA and TWRA partnered to stabilize the critically eroding shoreline along the Tennessee River portion this parcel. The stabilization project protects the land, allowing continued management, and protect from further siltation of the river in an area supporting sensitive mussel species.

The land cover of the forested areas of the parcel range from upland hardwoods to mostly bottom-land hardwoods. These hardwoods provide soft and hard mast along with den and nest sites for various species of wildlife. This parcel receives high volume of public use. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a medium to high probability for the presence of cultural resources, but only a portion has been surveyed. Requests for private water use facilities would not be considered.

Table 4-165. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SW and 118–SE
TVA D-Stage Map Numbers	62 and 65
Stream Mile and Bank	TRMs 518 to 519R
Land Use/Land Cover	Bottomland hardwoods and agricultural fields

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for wildlife management
Potential Projects	Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 166 - (469.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel encompasses portions of Clear Creek (Blue Springs Slough) and Tadpole Creek and stretches along the right descending bank of the Tennessee River. The majority of this parcel (278 acres) is managed as agricultural and early successional habitat. The agricultural lands are row-cropped via a term agricultural license. NWSGs were established by TVA and partners, and are managed through prescribed burning by a licensee. This parcel also contains a large area of flooded timber, along with the large sloughs within, which all contribute to the habitat for waterfowl, shorebirds, mammals and other upland wildlife. While this tract does not have vehicle access available to the public, it still receives a high level of public use via the Tennessee River. The habitat and associated public use provided on this parcel is an amazing resource. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a high probability for the presence of cultural resources. Only a small portion has been surveyed. Requests for private water use facilities would not be considered.

Table 4-166. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE and 118–SW
TVA D-Stage Map Numbers	32, 65, and 66
Stream Mile and Bank	TRMs 519 to 520.8R
Land Use/Land Cover	Bottomland hardwoods, scrub/shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, fishing, and wildlife observation
Current Agreements/Commitments	Agricultural license for row crop and hay production
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 167 - (38.8 acres)

Zone 7, Shoreline Operations

This parcel consists of six non-contiguous tracts of land located in multiple creeks along the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered. This parcel has a high probability for the presence of cultural resources, but it has not been adequately surveyed.

Table 4-167. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SW and 118–SE
TVA D-Stage Map Numbers	65 and 66
Stream Mile and Bank	Clear Creek Mile 1.0RL, Spring Creek Mile 1.0R, and Tadpole Branch Mile 1.5R
Land Use/Land Cover	Mixed pine and hardwood with maintained lawns
Fronts Former TVA Tract(s)	XCR–202, XCR–203, XCR–204, XCR–205, XCR–206, and XCR–207
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 168 - (117.9 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This long narrow parcel is located along the right descending bank of the Tennessee River and stretches between river miles 520.8 526.8. The parcel fronts both private farms and public lands managed by TWRA. The parcel is mostly mixed hardwood fronting steep river banks, with some sloughs along the shoreline. Upon TWRA's acquisition of Yuchi Refuge on Smith Bend, TVA entered into an agreement allowing TWRA to manage a portion of this parcel (TRMs 520.8 to 525). The parcel also contains the Rhea County, Tennessee portion of historical Eaves Ferry. Sensitive fish and mussels exist in this riverine section fronting this parcel. While the ferry no longer operates, the road through Yuchi Refuge (Breedenton Ferry Road) provides an informal launch ramp for lake users. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a high probability for the presence of cultural resources. This parcel has

not been adequately surveyed. Requests for private water use facilities would not be considered.

Table 4-168. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs and Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	64, 66, 67, and 69
Stream Mile and Bank	TRMs 520.7-526.8R
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Wildlife Observation and informal boat launch
Current Agreements/Commitments	License to Tennessee Wildlife Resources Agency for Yuchi Refuge
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resource Agency

Parcel 169 - (163.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

The majority of this parcel is managed under a revocable license to TWRA as the Yellow Creek WMA. This parcel is one of four Chickamauga WMAs planted in waterfowl food during the summer and flooded during the fall and winter for migrating waterfowl. Consequently, high numbers of migrant waterfowl utilize this area, and heavy competition among hunters has been mitigated with drawings for hunting opportunities. Approximately one-half of this parcel is comprised of scrub/shrub and emergent wetlands adjacent to a wooded creek channel. The wetlands provide the needed food, cover, and reproductive requirements for semi-aquatic mammals, wading birds, marsh birds, raptors, and resident wood ducks. The land cover is some agricultural fields, with the majority being bottomland hardwood cover. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-169. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	1, 64, and 69
Stream Mile and Bank	TRM 524.5L Yellow Creek Mile 0-4 L & R
Land Use/Land Cover	Yellow-poplar, sweetgum, bottomland hardwoods, agricultural fields, scrub/shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 170 - (0.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for Yellow Creek Road. While the parcel is adjacent to TVA property under a term license agreement to TWRA for wildlife management, the intent of this parcel is support the road ROW. In locations where the road ROW and wildlife management are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed.

Table 4-170. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D–Stage Map Numbers	69
Stream Mile and Bank	Yellow Creek Mile 1.6R TRM 527R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Rhea County, Tennessee for a roadway

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	None identified
Potential Partners	Rhea County, Tennessee

Parcel 171 - (52.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the left descending bank of Yellow Creek. The parcel serves as a buffer for Watts Bar Nuclear Plant. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-171. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D–Stage Map Numbers	69
Stream Mile and Bank	Yellow Creek Mile 0 to 1R TRM 527R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 172 - (63.1 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Chickamauga Shoreline HPA. The shoreline parcel is a mixture of open fields and wooded land with steep banks along the lakeshore. Most of the shoreline fronts private property consisting of farms, and some low-density residential areas. The area provides habitat and resources for Osprey and Bald Eagle. False foxglove (*Aureolaria patula*) is located upstream from the Sewee Creek, and this portion of the reservoir is a spawning area for federally listed snail darter (*Percina tanasi*). Several state and federally listed mussel species are located along the water's edge. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a high probability for the presence of cultural resources, but

portions need an adequate survey. Requests for private water use facilities would not be considered.

Table 4-172. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Rhea and Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	1, 64, 67, and 68
Stream Mile and Bank	TRMs 524.5-528.6L
Land Use/Land Cover	Upland and bottomland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 173 - (20.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three non-contiguous tracts of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-173. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	68
Stream Mile and Bank	TRM 528.2L
Land Use/Land Cover	Mixed pine and hardwood
Fronts Former TVA Tract(s)	XCR–271, XCR–272, and XCR–273
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 174 - (1.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Watts Creek, a tributary to TRM 528.2L, and is encumbered by six TL ROWs. Wetlands are also present on the parcel and along the shoreline. Portions of this parcel have a medium probability for the presence of cultural resources. A survey should be done of areas above water. Requests for private water use facilities would not be considered.

Table 4-174. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D–Stage Map Numbers	68
Stream Mile and Bank	TRM 528.2L
Land Use/Land Cover	Transmission line right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 175 - (3.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along Watts Creek and is adjacent to former TVA property (XTCR-32) transferred to the state of Tennessee for public recreation. The area is currently undeveloped. The parcel is accessible via SR-304. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-175. Parcel Information

Location Component	Parcel Specific Information
County, State	Meigs, Tennessee
TVA D−Stage Map Numbers	68
Stream Mile and Bank	TRM 528.2L

Parcel 176 - (0.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. Layman subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees. This parcel has a high probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-176. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	67
Stream Mile and Bank	TRM 526.7L
Land Use/Land Cover	Mixed pine and hardwood
Fronts Former TVA Tract(s)	XCR–270
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 177 - (37.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of four non-contiguous tracts of land located along the left and right descending banks of the Tennessee River in Sewee Creek. This parcel lies entirely below the 685.44-foot msl contour. Whitted and W.B. Moss subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns.

This parcel has a high probability for the presence of cultural resources between Sewee Creek miles 0 to 2.5. This parcel has a medium probability for the presence of cultural resources from Sewee Creek miles 2.5 to the end of the parcel. None of this parcel has been adequately surveyed for cultural resources.

Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-177. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	64, 67,and 68
Stream Mile and Bank	Sewee Creek miles 0.0 to 3.2RL
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–259, XCR–260, XCR–261, XCR–262, XCR–263, XCR–264, XCR–267, XCR–268,and XCR–269
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 178 - (1.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the Sewee Creek and adjoins former TVA property (XTCR-31) transferred to the state of Tennessee for public recreation. A boat-launching ramp has been developed on this parcel, and SR-30 provides access to the parcel. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-178. Parcel Information

Location Component	Parcel Specific Information
County, State	Meigs, Tennessee
TVA D−Stage Map Numbers	67
Stream Mile and Bank	TRM 524.5L

Parcel 179 - (0.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for SR-304. While a portion of the parcel is located adjacent to former TVA property (XTCR-31) transferred to the state of Tennessee for public recreation purposes, the intent of this parcel is support the road ROW. In locations where the road ROW and public recreation are complementary, requests to support the adjacent public recreation would be considered. However, requests for private water use facilities would not be considered. Portions of this parcel have a medium probability for the presence of cultural resources. These portions have not been surveyed.

Table 4-179. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D–Stage Map Numbers	67
Stream Mile and Bank	Sewee Creek Mile 1.7B TRM 528.2L
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to the state of Tennessee for a roadway • Revocable license to Volunteer Electric Company for electric utilities
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 180 - (4.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is within the TVA Upper Chickamauga Unit Management Plan. It is a narrow strip of land along the shoreline fronting former TVA property (XCR-264) where the appropriate rights for private water use facilities do not exist.

The land cover is mixed hardwoods and emergent wetlands along the shoreline that would both provide quality habitat for wildlife. This parcel has a low probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-180. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	68
Stream Mile and Bank	Sewee Creek Mile 3.6 B
Land Use/Land Cover	Bottomland hardwoods and upland hardwoods
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 181 - (0.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of four small islands along Sewee Creek. The land cover is mainly bottomland hardwoods and provides adequate wildlife observation. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-181. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	67
Stream Mile and Bank	Sewee Creek Miles 2 to 2.7R
Land Use/Land Cover	Bottomland hardwoods
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	Survey for historic properties
Potential Partners	None identified

Parcel 182 - (6.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of the Tennessee River. The land cover is mostly in open field condition with some reversion occurring. Access to the parcel is by water only. This parcel does border a section of river where sensitive fish and mussel species inhabit. This parcel is within TVA 2000 Upper Chickamauga Unit Management Plan. This parcel has medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-182. Parcel Information

Location Component and Public Involvement Opportunities	**Parcel Specific Information**
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	64
Stream Mile and Bank	TRM 524.2L
Land Use/Land Cover	Upland hardwoods and open shoreline
Known Dispersed Recreation Opportunities	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 183 - (2.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a high probability for the presence of cultural resources. A cave utilized by federally listed bats is located near this parcel. Water use facilities have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-183. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	64
Stream Mile and Bank	TRM 523.7L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–258
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 184 - (18.7 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Butcher Bluff and Eaves Bluff HPAs.

Butcher Bluff HPA encompasses part of Butcher Bluff overlooking Smith Bend. This parcel contains habitat for Appalachian bugbane (*Cimicifuga rubifolia*), a plant recently removed in 2014 from Tennessee's endangered species list. This parcel also provides perching sites for wintering bald eagles and the water along the edge of the bluff contain federally and state-listed endangered mussel species and is a major spawning area for several fish species.

Eaves Bluff HPA encompasses part of Eaves Bluff, adjacent to and upstream from the historic registered Eaves home. The steep, wooded rock bluffs are habitat for wintering bald eagles and northern bush honeysuckle (*Diervilla lonicera*), state-listed in Tennessee. Several federally and state-listed mussel species occur in the Tennessee River along this parcel, and it serves as a spawning area for several species of fish.

This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a medium probability for the presence of cultural resource, but it has not been adequately surveyed. Requests for private water use facilities would not be considered.

Table 4-184. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	64
Stream Mile and Bank	TRMs 522.4 to 523.3L
Land Use/Land Cover	Upland hardwood forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 185 - (3.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located at the old Eaves Ferry landing. A boat-launching ramp has been developed, and the parcel is under joint license to the city of Decatur and Meigs County, Tennessee. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-185. Parcel Information

Location Component	Parcel Specific Information
County, State	Meigs, Tennessee
TVA D−Stage Map Numbers	64
Stream Mile and Bank	TRM 523.2L

Parcel 186 - (0.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for Hill Road. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-186. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D–Stage Map Numbers	64
Stream Mile and Bank	TRM 523L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to the state of Tennessee for a roadway
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 187 - (47.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along the left descending bank of the Tennessee River and terminates downstream at Hunter Island. Hunter Island is a unique tract that receives some public use and accessible via the river. A term agricultural license access provided by a bridge on the south side is occurring. The shoreline is mostly wooded with upland hardwoods and fronts agricultural tracts of private land. The parcel also lies along the section of river providing habitat to sensitive fish and mussel species. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a high probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-187. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	63 and 64
Stream Mile and Bank	TRMs 520.7-522.5L
Land Use/Land Cover	Upland hardwoods and agricultural hay fields
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Term agricultural license for hay farming
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 188 - (12.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium to high probability for the presence of cultural resources. Water use facilities have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-188. Parcel Information

Location Component and Public Involvement Opportunities	**Parcel Specific Information**
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	63 and 64
Stream Mile and Bank	TRM 522L
Land Use/Land Cover	Mixed pine and hardwood trees
Fronts Former TVA Tract(s)	XCR–254, XCR–255, XCR–256 and XCR–257
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 189 - (1.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is a very narrow shoreline area in a cove behind Hunter Island. This parcel is within the TVA Upper Chickamauga Unit Management Plan. The land cover on this tract is mixed upland and bottomland hardwoods. This parcel has a low probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-189. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	63
Stream Mile and Bank	TRM 521L
Land Use/Land Cover	Bottomland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 190 - (51.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of the Tennessee River. This parcel has a few areas of hardwood cover, but the majority of the area is managed via a term agricultural license. This parcel is within the TVA Upper Chickamauga Unit Management Plan. Portions of this parcel have a high probability for the presence of cultural resources. Other portions have medium probability for the presence of cultural resources. This parcel has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-190. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs and Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SW and 118–SE
TVA D-Stage Map Numbers	62, 63, and 65
Stream Mile and Bank	TRMs 518.2-520.7L
Land Use/Land Cover	Agricultural fields and mixed hardwoods
Known Dispersed Recreation Opportunities	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	Term agricultural license for hay production
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 191 - (3.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees. This parcel has a medium probability for the presence of cultural resources. Water use facilities have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-191. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D-Stage Map Numbers	63 and 65
Stream Mile and Bank	TRM 520L
Land Use/Land Cover	Mixed pine and hardwood trees
Fronts Former TVA Tract(s)	XCR–252 and XCR–253
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 192 - (1.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is adjacent to former TVA property (XTCR-28) transferred to the state of Tennessee for public recreation. The parcel is located at the old Washington Ferry landing, and a boat-launching ramp is located on the parcel. The site is accessible from SR-30. This parcel has a high probability for the presence of cultural resources. A portion has been surveyed for cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-192. Parcel Information

Location Component	Parcel Specific Information
County, State	Meigs, Tennessee
TVA D−Stage Map Numbers	63
Stream Mile and Bank	TRM 518.02L

Parcel 193 - (429.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel stretches approximately three miles along the left descending bank of the Tennessee River. The area is locally known as McKinley Branch and is managed by TVA with numerous partners assisting to maximize habitat and public use enhancements. Partners (like TWRA, Ducks Unlimited, Quail Unlimited, local farmers, Meigs County High School, etc.) have collaborated to make this parcel a showcase.

Approximately 190 acres are managed as cropland for the benefit of waterfowl and upland wildlife. Approximately 75 acres are managed in a sub-impoundment for waterfowl. TVA and TWRA manage the emergent vegetation to maintain and enhance the habitat for a variety of wildlife species. The land cover of the forested areas is primarily bottom-land hardwoods. These hardwoods provide soft and hard mast along with den and nest sites for various species of wildlife. This parcel receives high volume of public use. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a high probability for the presence of cultural resources. Only a small portion has been surveyed. Requests for private water use facilities would not be considered.

Table 4-193. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs and Rhea, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE, 118–SW, and 119–NE
TVA D-Stage Map Numbers	57, 61, and 63
Stream Mile and Bank	TRMs 514.5-517.8L
Land Use/Land Cover	Bottomland hardwoods and agricultural fields
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Term agricultural licenses for row crop and hay production

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 194 - (21.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three non-contiguous tracts of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees. The northern part of this parcel has a medium probability for the presence of cultural resources. The southern portion of this parcel has a high probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline and future requests for private water use facilities would be considered.

Table 4-194. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	118–SE and 119–NE
TVA D-Stage Map Numbers	57 and 61
Stream Mile and Bank	TRM 515L
Land Use/Land Cover	Mixed pine and hardwood trees
Fronts Former TVA Tract(s)	XCR–246, XCR–247, XCR–248,and XCR–250
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 195 - (8.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is adjacent to former TVA property (XTCR-27, XTCR-91, and XTCR-157) transferred to the state of Tennessee for public recreation. A boat-launching ramp has been developed on the parcel. The area is adjacent to Cotton Port Road. This parcel has a medium to high probability for the presence of cultural resources. A small portion of the parcel has been

surveyed, but most has not. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-195. Parcel Information

Location Component	Parcel Specific Information
County, State	Meigs, Tennessee
TVA D−Stage Map Numbers	57
Stream Mile and Bank	TRM 514.5L

Parcel 196 - (1.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for Cottonport Road. While a portion of the parcel is located adjacent to former TVA property (XTCR-27 and XTCR-157) transferred to the state of Tennessee for public recreation purposes, the intent of this parcel is support the road ROW. In locations where the road ROW and public recreation are complementary, requests to support the adjacent public recreation would be considered. However, requests for private water use facilities would not be considered.

Table 4-196. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NE
TVA D–Stage Map Numbers	57
Stream Mile and Bank	Goodfield Creek Mile 0,2B TRMs 513.5L and 514.7L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easements to the state of Tennessee for a recreation area and roadway
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 197 - (30.9 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located within Goodfield Creek and managed by TWRA via a permanent easement. There is a significant amount of aquatic, emergent, scrub/shrub and forested wetlands on this parcel. This habitat is highly important for a number of terrestrial and aquatic

species. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-197. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NE and 118–SE
TVA D-Stage Map Numbers	57
Stream Mile and Bank	TRM 514.7L
Land Use/Land Cover	Upland and bottomland hardwoods, emergent wetlands, and open fields
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	Permanent easement to Tennessee Wildlife Resources Agency for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 198 - (13.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River in Goodfield Creek. This parcel lies entirely below the 685.44-foot msl contour. Goodfield Landing subdivision is located on the back-lying private land. The current land cover is primarily mixed pine and hardwood trees. This parcel has a medium probability for the presence of cultural resources, but it has not been adequately surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-198. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NE
TVA D-Stage Map Numbers	57
Stream Mile and Bank	Goodfield Creek 0.8L
Land Use/Land Cover	Mixed pine and hardwood trees

Location Component and Public Involvement Opportunities	Parcel Specific Information
Fronts Former TVA Tract(s)	XCR–242, XCR–243, XCR–244 and XCR–245
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities.

Parcel 199 - (39.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located downstream of Goodfield Creek near and along the left descending bank of the Tennessee River. While portions of this parcel are used for agriculture, the majority of it supports high-quality aquatic bed, emergent and scrub/shrub wetlands. For those who want to fish the shoreline of Goodfield Creek, the parcel offers the public access from the small boat-launching ramp parking area. The downstream portion of this parcel supports a small upland hardwood/pine stand. This parcel is within the TVA Upper Chickamauga Unit Management Plan. Most of this parcel has a high probability for the presence of cultural resources. Only a small portion of this parcel has been surveyed. Requests for private water use facilities would not be considered.

Table 4-199. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NE
TVA D-Stage Map Numbers	57 and 61
Stream Mile and Bank	TRM 514L
Land Use/Land Cover	Agricultural fields, bottomland hardwoods, emergent wetlands, and scrub/shrub
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Term agricultural license for hay production
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 200 - (10.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. Coleman and Roy Kile subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been adequately surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-200. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW and 119–NE
TVA D-Stage Map Numbers	56 and 57
Stream Mile and Bank	TRM 513.2 L:
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–239 and XCR–240
Structure Profile	699-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 201 - (5.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel fronts a portion of Coleman Subdivision where the appropriate rights for private water use facilities do not exist. The parcel is narrow with steep topography to the water. Much of the parcel is wooded with aquatic vegetation along the shoreline. This parcel provides only fair capability for nesting cover and food resources for wildlife. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-201. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NE and 119–NW
TVA D-Stage Map Numbers	56 and 57
Stream Mile and Bank	TRM 513.1L
Land Use/Land Cover	Upland hardwoods and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 202 - (14.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This commercial recreation area is managed under a lease agreement to Cotton Port Fish N Camp. Amenities include a campground, picnic area, boat-launching ramp, and fuel services. Meigs County Road 235 provides access to this area. This parcel has a low to medium probability for the presence of cultural resources, and the area has been partially surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-202. Parcel Information

Location Component	Parcel Specific Information
County, State	Meigs, Tennessee
TVA D−Stage Map Numbers	56 and 57
Stream Mile and Bank	TRM 513L

Parcel 203 - (15.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. Haskell Wilson, Cypress Hills, and Holly Glen Shores subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained

lawns. This parcel has a medium probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-203. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	56
Stream Mile and Bank	TRM 512.7L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–237 and XCR–238
Structure Profile	698-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 204 - (232.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is composed of five irregularly shaped peninsulas located behind a string of islands. Approximately 80 percent of this parcel is prime farmland. Some pine and bottomland hardwood stands exist on this parcel. These trees are not significant from a forest management standpoint, but they do add hard and soft mast to the agricultural component. All of the agricultural fields are licensed for hay and some small grain for wildlife habitat enhancement. All livestock grazing has been phased out on this parcel. The wetland complex associated along this parcel is high-quality, from aquatic bed, emergent and scrub/shrub. These wetlands in combination with the forested areas, agricultural fields, and buffers provide a diverse habitat regime that supports many species of wildlife. Public access is basically from the river. This parcel is within the TVA Upper Chickamauga Unit Management Plan.

This parcel has a medium to high probability for the presence of cultural resources. Only a small portion has been surveyed. Requests for private water use facilities would not be considered.

Table 4-204. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	50, 53, and 56

Location Component and Public Involvement Opportunities	Parcel Specific Information
Stream Mile and Bank	TRMs 508.8 to 511.3L
Land Use/Land Cover	Agricultural fields, bottomland hardwoods, pines and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Term agricultural license for hay production
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 205 - (31.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of four non-contiguous tracts of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. Shoreline Estates subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium to high probability for the presence of cultural resources. Only a small portion of this parcel has been surveyed for cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-205. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	53 and 56
Stream Mile and Bank	TRM 510.5L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–234, XCR–235, XCR–236, and XCR–237
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 206 - (17.6 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel consists of three small and narrow islands The land cover is bottomland hardwood; scrub/shrub and emergent wetlands; and aquatic bed wetlands between these islands and the shoreline. These islands and the surrounding vegetation provide high-quality nesting habitat for waterfowl and other wildlife. During winter draw-down, the area between the islands and the shoreline become mud flats which provides habitat for migrant shorebirds. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a high probability for the presence of cultural resources, but it has not been adequately surveyed. Requests for private water use facilities would not be considered.

Table 4-206. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	53
Stream Mile and Bank	TRM 510L
Land Use/Land Cover	Bottomland hardwoods and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	None identified

Parcel 207 - (17.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been adequately surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-207. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	50 and 53
Stream Mile and Bank	TRM 508.8L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–228, XCR–229, XCR–230, XCR–231, XCR–232, and XCR–233
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 208 - (159.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel includes a 3.5-mile string of Islands and several tracts of mainland along the left descending bank of the Tennessee River. These lands are under easement to TWRA for the Chickamauga WMA. Many of the tracts are fronted by aquatic bed, emergent and scrub-shrub wetlands. Between the island chain and the mainland, the water depth is shallow and provides many acres of mudflats during the drawdown. The land cover is a mixture of bottom-land hardwoods, some scattered pine and agricultural fields. This diverse land cover is valuable wildlife habitat for many species, both mammal and bird. This parcel is within the TVA Upper Chickamauga Unit Management Plan. This parcel has a high probability for the presence of cultural resources, but has not adequately been surveyed. Requests for private water use facilities would not be considered.

Table 4-208. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	49, 50, 52, and 53
Stream Mile and Bank	TRMs 506 to 509.4L
Land Use/Land Cover	Bottomland hardwoods, pines, agricultural fields, scrub/shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Revocable license to Tennessee Wildlife resources agency for wildlife management

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee wildlife resources agency

Parcel 209 - (67.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three non-contiguous tracts of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. Good Hope Shores subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-209. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	49, 50, and 52
Stream Mile and Bank	TRM 505.8 to 508.1L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–221, XCR–222, XCR–223, XCR–224, XCR–225, XCR–226, XCR–227, and XCR–228
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 210 - (10.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

Armstrong Ferry Recreation Area is located on this parcel. The area was initially developed by TVA and is now operated under a lease agreement. Amenities include a boat-launching ramp, swimming beach, picnic tables, and a campground. The area is accessed by Old Armstrong Ferry Road. Requests for private water use facilities would not be considered. This parcel has a

high probability for the presence of cultural resources. One historic cemetery is found in this parcel. The parcel has not been adequately surveyed for cultural resources. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-210. Parcel Information

Location Component	Parcel Specific Information
County, State	Meigs, Tennessee
TVA D−Stage Map Numbers	52
Stream Mile and Bank	TRM 505.5L

Parcel 211 - (0.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for Armstrong Ferry Road. Requests for private water use facilities would not be considered.

Table 4-211. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D–Stage Map Numbers	52
Stream Mile and Bank	TRMs 505.4 to 505.8L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to the state of Tennessee for a roadway
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 212 - (41.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is comprised mostly of small islands and tracts of land adjacent to the shore along Armstrong Bend. The adjacent land is owned by TWRA and is managed as part of the Hiwassee Refuge. Likewise, this parcel is under agreement with TWRA to manage as a part of that Refuge. These tracts offer great shoreline habitat for waterfowl, along with emergent/scrub-shrub wetlands, and aquatic bed wetlands. This parcel has a high probability for the presence of

cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-212. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	52 and 55
Stream Mile and Bank	TRMs 502.5 to 506L
Land Use/Land Cover	Mixed hardwoods, scrub/shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Wildlife observation and fishing
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 213 - (29.9 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Armstrong Bend HPA. The parcel is adjacent to the Armstrong Ferry public use area and contains an unusual cedar barrens plant community. Barn owls (*Tyto alba*), listed in Tennessee as in need of management in 1976, roost on rock bluffs overlooking the reservoir. This parcel features a 7-acre stand of 70 year old cedar/hardwoods and 21 acres of 100 year old large upland hardwoods. The parcel also features several cedar barrens pant communities.

The parcel is under license to TWRA for management. The parcel is narrow and provides distinctive aesthetic qualities with respect to a contrast between the rock bluff and mixed hardwood and pine timber present throughout the tract. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-213. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	52 and 55
Stream Mile and Bank	TRM 505.2L
Land Use/Land Cover	Mixed hardwoods and pine timber
Known Dispersed Recreation Opportunities	Wildlife observation and fishing
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for wildlife management
Potential Projects	Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 214 - (810.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is located on the right descending bank of the Hiwassee River at the confluence of the Tennessee River. This parcel is managed under license to TWRA for the Hiwassee Refuge. While forest stands once were upland hardwoods, bottom-land hardwoods, and planted pine, southern pine beetle activity and salvage operations have left only scattered pockets of mature pine timber. Some pine regeneration has naturally occurred along with hardwoods in the cutover areas. TVA and TWRA have collaborated to conduct forest management of various applications, providing a healthier and diverse habitat.

The parcel also includes some impressive bluffs along the Hiwassee River, dominated by pine, red cedar and hardwood. Public access is limited due the presence of private land intersecting the parcel and the closest public roads. This parcel has a high probability for the presence of cultural resources. One known historic cemetery is present. A population of white prairie-clover (*Dalea candida*), a state threatened species, has been recorded in this parcel. Requests for private water use facilities would not be considered.

Table 4-214. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	44, 48, 49, and 52
Stream Mile and Bank	TRM 500 to 502.5L Hiwassee River Mile 1 to 4R

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Upland hardwoods, bottomland hardwoods, and pines
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 215 - (38.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This narrow parcel is located along the right descending bank of the Hiwassee River and is adjacent to former TVA property (XTCR-94) transferred to the state of Tennessee for wildlife management. This parcel is managed by TWRA as part of the Hiwassee Refuge. The land cover is upland hardwood with some scattered red cedar along the shoreline. There is a medium probability for the presence of cultural resources in this parcel, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-215. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW and 119–SW
TVA D-Stage Map Numbers	39 and 44
Stream Mile and Bank	Hiwassee River Miles 3.9 to 6R
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	Agreement with the state of Tennessee for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 216 - (2.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the Hiwassee River and is encumbered by three TL ROWs. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-216. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D–Stage Map Numbers	39 and 44
Stream Mile and Bank	Hiwassee River 5.3B
Land Use/Land Cover	Transmission line right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to the state of Tennessee for a roadway • Revocable license to Tennessee Wildlife Resources Agency for a wildlife management agency
Potential Projects	None identified
Potential Partners	None identified

Parcel 217 - (20.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This narrow parcel is located along the right descending bank of the Hiwassee River and adjacent to former TVA property (XTCR-94) transferred to the state of Tennessee for wildlife management. This parcel is managed by TWRA for the Hiwassee Refuge. Portions of this parcel have a medium to high probability for the presence of cultural resources. Parts of this parcel with a steep contour have low probability for the presence of cultural resources. None of this parcel has been adequately surveyed. Requests for private water use facilities would not be considered.

Table 4-217. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SW
TVA D-Stage Map Numbers	39

Location Component and Public Involvement Opportunities	Parcel Specific Information
Stream Mile and Bank	Hiwassee River Miles 6 to 7.4R
Land Use/Land Cover	Upland hardwoods, bottomland hardwoods, and emergent wetlands
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	Agreements with the state of Tennessee for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 218 - (5.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the Hiwassee River and is encumbered by three TL ROWs. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-218. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D–Stage Map Numbers	39 and 44
Stream Mile and Bank	Hiwassee River 5.3B
Land Use/Land Cover	Transmission line right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for a wildlife management agency
Potential Projects	None identified
Potential Partners	None identified

Parcel 219 - (34.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located at the confluence of Agency Creek and the Hiwassee River and includes Agency Creek Campground and Dock. An undeveloped portion of the parcel is also adjacent to former TVA property (XTCR-33) transferred to the state of Tennessee for public recreation.

Agency Creek Recreation Area was initially developed and operated by TVA and is currently managed under a lease agreement. Amenities include a campground, boat-launching ramp, picnic tables, and marina.

A portion of this parcel (between TVA monuments 39-25 and 45-15) is also managed as part of Sportsman's Highway 58 Boat Dock. Amenities associated with this commercial recreation area include boat slips, picnic area, and a boat-launching ramp.

This parcel has a low to medium probability for the presence of cultural resources. The area has had some survey for cultural resources. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-219. Parcel Information

Location Component	Parcel Specific Information
County, State	Meigs, Tennessee
TVA D−Stage Map Numbers	39 and 45
Stream Mile and Bank	Hiwassee River Mile 7.5R

Parcel 220 - (5.5 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses two noncontiguous tracts of land and contains a portion of the ROW for SR-58. While a portion of the parcel is located adjacent to former TVA properties (XTCR-33 and XTCR-96) which was transferred to the state of Tennessee for public recreation and wildlife management purposes, the intent of this parcel is support the road ROWs. In locations where the road ROWs and wildlife management or public recreation are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered. This parcel has a low probability for the presence of cultural resources.

Table 4-220. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SW
TVA D–Stage Map Numbers	39
Stream Mile and Bank	Hiwassee River Mile 7.4B
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	Bank fishing

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Permanent easements to the state of Tennessee for a bridge and roadway • Revocable license to the state of Tennessee for public recreation • Lease to Agency Creek Recreation Area • Land Use Permit to Meigs County, Tennessee for a recreational access area
Potential Projects	None identified
Potential Partners	• Agency Creek Recreation Area • Meigs County, Tennessee • State of Tennessee

Parcel 221 - (29.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located adjacent to SR-58. The parcel did support a significant loblolly pine stand which was infested with southern pine beetles around 2001. TVA salvaged the pines from this parcel and has allowed natural regeneration to re-forest the property. The healthy young stand now is comprised of naturally reseeded loblolly pine and mixed hardwoods. This parcel has a medium potential for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-221. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	45
Stream Mile and Bank	Hiwassee River Mile 7.4R
Land Use/Land Cover	Mixed hardwoods and pines
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 222 - (2.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the left descending bank of the Agency Creek. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-222. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW
TVA D-Stage Map Numbers	45
Stream Mile and Bank	Agency Creek 1.0L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–340 and XCR–341
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 223 - (0.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This small shoreline parcel is located entirely below the 685.44-foot msl contour and adjacent to former TVA property (XCR-341). The parcel has been developed for a privately owned campground, and there is an existing water use facility supporting the campground. This parcel has a medium probability for presence of cultural resources, but it has not been surveyed.

Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-223. Parcel Information

Location Component	Parcel Specific Information
County, State	Meigs, Tennessee
TVA D−Stage Map Numbers	45
Stream Mile and Bank	Hiwassee River Mile 7.5R

Parcel 224 - (110.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This property is located in the head of the Agency Creek embayment and adjacent to former TVA property (XTCR-117) transferred to the state of Tennessee for wildlife management. The parcel includes a diversity of bottomland hardwoods and pines, some agricultural fields, and a high-quality wetland complex of forested, scrub/shrub, emergent and aquatic bed wetlands. Most of this parcel has a medium to high probability for the presence of cultural resources. Areas with a very steep contour have a low probability for the presence of cultural resources. None of this parcel has been surveyed. Requests for private water use facilities would not be considered.

Table 4-224. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW and 119–SW
TVA D-Stage Map Numbers	39 and 45
Stream Mile and Bank	Hiwassee River Miles 7 to 8R
Land Use/Land Cover	Bottomland hardwoods, upland hardwoods, and emergent wetlands
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	• Revocable license for telephone utilities • Permanent easement to the state of Tennessee for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	State of Tennessee

Parcel 225 - (7.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses three noncontiguous tracts of land and contains a portion of the ROW for Lamontville Road. While a portion of the parcel is located adjacent to former TVA properties (XTCR-35 and XTCR-36) which was transferred to the state of Tennessee for public recreation, the intent of this parcel is support the road ROWs. In locations where the road ROWs and public recreation are complementary, requests to support the adjacent land use would be considered.

However, requests for private water use facilities would not be considered. This parcel has a low probability for the presence of cultural resources.

Table 4-225. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW and 119–SE
TVA D–Stage Map Numbers	40 and 45
Stream Mile and Bank	
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easements to the state of Tennessee for a roadway • Revocable license to the state of Tennessee for public recreation • Land use permit to WWK Properties for electric utilities, vegetation management, and riprap • Revocable license to city of Decatur, Tennessee for water utilities • Revocable license to Meigs County, Tennessee Highway Department for a bridge • Revocable license to Southern Bell Telephone and Telegraph Company for telephone utilities • Revocable license to Volunteer Electric Cooperative for electric utilities
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 226 - (25.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists one contiguous tract of land located along the right descending bank of the Hiwassee River. This parcel lies entirely below the 685.44-foot msl contour. Lakehaven Estates, Lewis Branch, and Hiwassee Heights subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. The heavily developed areas in this parcel have a low probability for the presence of cultural resources. The less developed areas have a medium probability for the presence of cultural resources. These areas have not been adequately surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-226. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW and 119–SW
TVA D-Stage Map Numbers	39, 40, and 45
Stream Mile and Bank	Hiwassee River Mile 8.0R
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–342, XCR–343, XCR–344, XCR–345, XCR–346, XCR–347, and XCR–348
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 227 - (1.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of three small islands in the head of the Lewis Branch arm of Agency Creek embayment. The land cover is bottomland hardwood with scrub/shrub and emergent wetlands on the shorelines. This parcel has a low probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-227. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SW
TVA D-Stage Map Numbers	39 and 40
Stream Mile and Bank	Hiwassee River Mile 8R
Land Use/Land Cover	Bottomland hardwoods and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	None identified

Parcel 228 - (155.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is locally referred to as Price Creek, once supported high-quality upland hardwoods and pine sawtimber. In 2001, southern pine beetles infested the pines, and TVA

conducted salvage operations of the pine trees. Large pine trees along with a mix of upland hardwood and natural pine regeneration occur on the parcel.

The parcel has a full range of topography from flat to steep and moderate bluffs to gentle shoreline. The topography provides popular informal recreation. There have been unauthorized vegetation management and land-based encroachments on the parcel. TVA continues to investigate these potential encroachments. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-228. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE and 119–SW
TVA D-Stage Map Numbers	40
Stream Mile and Bank	Hiwassee River Miles 8.7-10.2R
Land Use/Land Cover	Upland hardwoods and pines
Known Dispersed Recreation Opportunities	Informal hiking and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 229 - (3.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel adjoins former TVA property (XTCR-35 and XTCR-36) transferred to the state of Tennessee for public recreation. A boat-launching ramp has been developed on this parcel. This area is located off Lamontville Road. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-229. Parcel Information

Location Component	Parcel Specific Information
County, State	Meigs, Tennessee
TVA D−Stage Map Numbers	40
Stream Mile and Bank	Hiwassee River Mile 10.0R

Parcel 230 - (7.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the left and right descending bank of Price Creek. This parcel lies entirely below the 685.44-foot msl contour. Lakewood Estates subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-230. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	40
Stream Mile and Bank	Price Creek 0.5RL
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–351, XCR–352, and XCR–354
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 231 - (1.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is a high-quality wetland area to include the full range, forested, scrub/shrub, emergent and aquatic bed wetlands. These areas are important for water quality and wildlife. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-231. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	40
Stream Mile and Bank	Hiwassee River Mile 10R
Land Use/Land Cover	Bottomland hardwoods and emergence wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	None identified

Parcel 232 - (8.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of Price Creek. This parcel lies entirely below the 685.44-foot msl contour. Sundown Shores subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. Most of this parcel has a low to medium probability for the presence of cultural resources. There is, however, one portion with a larger area that has a high probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Most of this parcel has a low to medium probability for the presence of cultural resources. There is, however, one portion with a larger area that has a high probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-232. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	40
Stream Mile and Bank	Price Creek 0.1L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–355 and XCR–356

Location Component and Public Involvement Opportunities	Parcel Specific Information
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 233 - (9.1 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel consists of a complex of narrow islands beginning at Hiwassee River mile 9.8R at the mouth of Price Creek, and terminating upstream at Hiwassee River mile 11.0. The islands are adjacent to a waterfowl area managed by TWRA. The shallow water between islands contains a mixture of emergent wetlands and fallen trees, providing good waterfowl nesting habitat and shorebird habitat. The land cover ranges from bottomland hardwoods to sand bars and mud flats. Several of the islands have lost most of their tree and shrub cover through erosion.

This parcel has a medium to high probability for the presence of cultural resources. Although there has been some field reconnaissance on some of these islands, known sites have not been tested to determine their integrity. Requests for private water use facilities would not be considered.

Table 4-233. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Meigs, and McMinn Counties, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	40 and 72
Stream Mile and Bank	Hiwassee River Miles 9.7 to 11.1R
Land Use/Land Cover	Bottomland hardwoods and emergent wetlands
Known Dispersed Recreation Opportunities	Primitive camping, fishing, and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	None identified

Parcel 234 - (10.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is adjacent to a tract (XTCR-98) TVA transferred to the state of Tennessee for public recreation. The parcel is located off Big Spring-Calhoun Road and is currently undeveloped. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-234. Parcel Information

Location Component	Parcel Specific Information
County, State	McMinn, Tennessee
TVA D−Stage Map Numbers	40
Stream Mile and Bank	Hiwassee River Mile 10.5R

Parcel 235 - (10.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the right descending bank of Hiwassee River. This parcel lies entirely below the 685.44-foot msl contour. Blevins Property, Willow Point (McMinn County), Lakeside (McMinn County) subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. The heavily developed portion of this parcel has a low to medium probability for the presence of cultural resources. The less developed portion has a medium probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-235. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	40, 71, and 72
Stream Mile and Bank	Hiwassee River Mile 11.9R
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–357, XCR–358, and XCR–359
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 236 - (75.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is composed of several islands and low-lying shoreline property. The parcel is located at the confluence of Rogers Creek and the Hiwassee River and adjacent to Ledford Island. Management of the parcel is conducted by TWRA for the Chickamauga WMA. This parcel has a medium probability for the presence of cultural resources. Only a portion of this parcel has been surveyed. Requests for private water use facilities would not be considered.

Table 4-236. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley and McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	71, 72, and 73
Stream Mile and Bank	Hiwassee River Miles 11.3 to13.5R
Land Use/Land Cover	Agricultural fields, bottomland hardwoods, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Agreement with the state of Tennessee for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 237 - (48.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel extends along both banks of Rogers Creek. The portion of the parcel along the right descending bank adjoins former TVA property (XTCR-100). Similarly, the portion of the parcel located along the left descending bank adjoins former TVA property (XTCR-29). Both former TVA properties were transferred to the state of Tennessee for public recreation. Big Spring-Calhoun Road provides access to the parcel, which is currently wooded and undeveloped. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-237. Parcel Information

Location Component	Parcel Specific Information
County, State	McMinn, Tennessee
TVA D−Stage Map Numbers	71
Stream Mile and Bank	Hiwassee River Mile 12.0R

Parcel 238 - (3.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the right descending bank of Rogers Creek. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-238. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	71
Stream Mile and Bank	Rogers Creek 2.0R
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–361
Structure Profile	692-foot mean sea level
Current Agreements/Commitments	None Identified

Parcel 239 - (192.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is located adjacent to former TVA property (XTCR-101) transferred to the state of Tennessee for wildlife management. This parcel is composed of high-quality wetlands including, forested, scrub/shrub, emergent and some aquatic bed. The parcel is a maze of waterfowl sub-impoundments controlled by levees and manipulation of the water levels for waterfowl and shorebird habitat. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-239. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NE and 119–SE
TVA D-Stage Map Numbers	71
Stream Mile and Bank	Hiwassee River Mile 12R
Land Use/Land Cover	Bottomland hardwoods, scrub/shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Agreement to the state of Tennessee for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 240 - (7.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of Rogers Creek. This parcel lies entirely below the 685.44-foot msl contour or the 690-foot msl contour, depending on location. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-240. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	71 and 72
Stream Mile and Bank	Rogers Creek Mile 0.2 – 1.2L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–369, XCR–370, XCR–371, XCR–372, XCR–373, and XCR–374
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 241 - (4.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the right descending bank of Hiwassee River. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-241. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	72 and 73
Stream Mile and Bank	Hiwassee River 13.5R
Land Use/Land Cover	Mixed pine and hardwood trees
Fronts Former TVA Tract(s)	XCR–375
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 242 - (25.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of two noncontiguous tracts of land located along the right descending bank of the Hiwassee River. The bluff is steep and wooded with upland hardwoods primarily, and some pine and eastern red cedar. Portions of this parcel have a medium probability for the presence of cultural resources. Areas with a steep contour have a low probability for the presence of cultural resources. Only a portion of this parcel has been surveyed. Requests for private water use facilities would not be considered.

Table 4-242. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley and McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	73
Stream Mile and Bank	Hiwassee River Mile 14R
Land Use/Land Cover	Upland hardwoods and bottomland hardwoods

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 243 - (4.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the right descending bank of Hiwassee River. This parcel lies entirely below the 685.44-foot msl contour and straight line boundary, depending on location. Riverview Subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-243. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	73
Stream Mile and Bank	Hiwassee River 14.4R
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–377
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 244 - (6.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is adjacent to former TVA property (XCR-378 and XCR-379) sold for group camp use. The parcel is used for water based recreation activities associated with Camp Cherokee. McMinn County, Tennessee Road 2 provides access to this area. This parcel has a

low to medium probability for the presence of cultural resources. Portions have not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-244. Parcel Information

Location Component	Parcel Specific Information
County, State	McMinn, Tennessee
TVA D−Stage Map Numbers	73
Stream Mile and Bank	Hiwassee River Mile 14.5R

Parcel 245 - (268.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This is a large bottomland parcel is located on the upper extent of North Mouse Creek. It contains at least six different tracts and is highly dissected by wetlands, mudflats, and shallow water areas. The land includes many scattered old field situations, with some areas consisting of bottomland hardwoods and natural loblolly pine. Grazing has been voluntarily reduced on one portion of the agricultural fields. In combination with adjacent private land, the tract provides good upland wildlife habitat which would be enhanced through wildlife habitat enhancement work through the agricultural areas. The tracts located near the towns of Charleston and Calhoun enhances its importance for public use. Some of the heavier pine stands were salvaged in the late 1990's due to a southern pine beetle infestation. These areas are regenerating nicely in a mixture of hardwood and pine species. This parcel is popular for bank fishing near the bridge, with most use being for hunting.

This parcel has a medium probability for the presence of cultural resources. Only a portion of this parcel has been surveyed. Requests for private water use facilities would not be considered.

Table 4-245. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119SE
TVA D-Stage Map Numbers	74, 73D
Stream Mile and Bank	North Mouse Creek Miles 1-3 L & R
Land Use/Land Cover	Bottomland hardwoods, emergent wetlands, agricultural fields, and mudflats
Known Dispersed Recreation Opportunities	Hunting and wildlife observation

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	Term agricultural license for hay production
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 246 - (20.5 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses five noncontiguous tracts of land and contains portions of the ROW for Interstate 75 and McMinn County, Tennessee Road 20. Some portions of this parcel have a low probability of cultural resources due to the construction of the highway and feeder roads. Other portions have a medium to high probability of cultural resources. Very little of the undisturbed portions of this parcel have been surveyed for cultural resources. Requests for private water use facilities would not be considered.

Table 4-246. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D–Stage Map Numbers	73 and 74
Stream Mile and Bank	North Mouse Creek Miles 0.9 to 2B Hiwassee River Mile 14.5R
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easements to the state of Tennessee for roadways • Revocable license to city of Decatur, Tennessee for water utilities • Revocable license to Southern Bell Telephone and Telegraph Company for telephone utilities • Revocable licenses to Volunteer Electric Cooperative for electric utilities
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 247 - (4.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the right descending bank of North Mouse Creek. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-247. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	73 and 74
Stream Mile and Bank	North Mouse Creek 1.5R
Land Use/Land Cover	Mixed pine and hardwood trees
Fronts Former TVA Tract(s)	XCR–380
Structure Profile	694 foot mean sea level
Current Agreements/Commitments	None identified

Parcel 248 - (1.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains portions of the ROW McMinn County, Tennessee Road 28. This parcel has a low probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-248. Parcel Information

Location Component and Public Involvement Opportunities	**Parcel Specific Information**
County, State	McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D–Stage Map Numbers	73 and 74
Stream Mile and Bank	North Mouse Creek 3.4B Hiwassee River Mile 14.5R
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to McMinn County, Tennessee for roadway

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	None identified
Potential Partners	McMinn County, Tennessee

Parcel 249 - (2.2 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This small parcel is located adjacent to Interstate 75 and fragmented from Chickamauga Reservoir. This parcel would be considered a candidate for surplus or easement for interstate expansion. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands to support industrial purposes would be considered.

Table 4-249. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	73 and 74
Stream Mile and Bank	North Mouse Creek Mile 2L Hiwassee River Mile 14.6R
Land Use/Land Cover	Deciduous forest and maintained field
Current Agreements/Commitments	None identified

Parcel 250 - (129.9 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is located at the confluence of North Mouse Creek and the Hiwassee River. Most of the parcel is encumbered with a permanent industrial easement for an industrial site. A portion of the parcel is utilized for settling ponds and is located below normal reservoir operating guides.

Most of this parcel has a low probability for the presence of cultural resources due to previous disturbance. The northwest portion of the parcel has a medium probability for the presence of cultural resources and has not been adequately surveyed. Requests for use of TVA lands to support industrial purposes would be considered.

Table 4-250. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	73
Stream Mile and Bank	Hiwassee River Mile 14.6R
Land Use/Land Cover	Dewatering area
Current Agreements/Commitments	Permanent easement to the Industrial Development Board of McMinn County for an industrial site.

Parcel 251 - (2.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains portions of the U.S. 11, Northeast Water Street (Charleston, Tennessee, city street), and a railroad. The road and railroad bed themselves have a low probability for the presence of cultural resources. Other portions of this parcel have a high probability for the presence of cultural resources and have not been adequately surveyed. Requests for private water use facilities would not be considered.

Table 4-251. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley and McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE and 125–SW
TVA D–Stage Map Numbers	77 and 81
Stream Mile and Bank	Hiwassee River Mile 18.3B and 19L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easements to American Telephone and Telegraph and South Central Bell Telephone Company for telephone utilities • Permanent easement to Bowaters Sothern Paper Company for a pipeline and railway • Permanent easement to Hiwassee Utilities Commission for a pipeline • Permanent easement to Southern Railway Company for a railway • Permanent easement to the state of Tennessee for a roadway • Revocable license to Bowaters Southern Paper Company, Hiwassee Utilities Commission, and Volunteer Electric Cooperative for power transmission utilities
Potential Projects	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Partners	American Telephone and Telegraph, Bowaters Southern Paper Company, Hiwassee Utilities Commission, Southern Railway Company, state of Tennessee, Volunteer Electric Cooperative

Parcel 252 - (50.7 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is located within the town of Calhoun, Tennessee along the Hiwassee River. Most of the parcel is encumbered with numerous contractual agreements and a railroad. Areas disturbed by the railroad have a low probability for the presence of cultural resources. Other parts of this parcel have a medium to high probability for the presence of cultural resources. Some portions have been surveyed, but most has not been adequately surveyed for cultural resources. Requests for use of TVA lands to support industrial purposes would be considered.

Table 4-252. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE and 125–SW
TVA D-Stage Map Numbers	77 and 81
Stream Mile and Bank	Hiwassee River Mile 18.6 to 20.4R
Land Use/Land Cover	Dewatering area
Current Agreements/Commitments	• Permanent easements to American Telephone and Telegraph Company and South Central Bell Telephone Company for telephone utilities • Permanent easement to L&N Railroad for a railroad • Permanent easements to Bowaters Southern Paper Corporation for a pipeline and railroad • Term easement to Southern Ionics, Incorporated for a barge terminal • Revocable land use permits to Southern Ionics, Incorporated for an industrial site, railroad, and storage • Revocable license to Bowaters Southern Paper Corporation for a playground • Revocable licenses to McMinn County, Tennessee for a pipeline and sewer utilities • Revocable license to National Alum Corporation for storage

Parcel 253 - (1.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is licensed to the city of Calhoun for public recreation and a boat-launching ramp has been developed on the property. Upper River Road provides access to the site. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-253. Parcel Information

Location Component	Parcel Specific Information
County, State	McMinn, Tennessee
TVA D−Stage Map Numbers	77
Stream Mile and Bank	Hiwassee River Mile 19.5R

Parcel 254 - (286.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel consists of narrow landholdings along the riverine section of the Hiwassee River. The larger portions of this parcel located along Bates Bend has historically been managed via term agricultural licenses. The other portions of the parcel are a buffer between low-density housing, farming, and forestland use. This wooded riverbank provides shade and insect production for fish, while providing riparian habitat for mammals, wood ducks and other wetland wildlife. The river section within this parcel supports sensitive fish species. This very long parcel has a high probability for the presence of cultural resources. Most of it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-254. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley and McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE,125–SW, and 126–NW
TVA D-Stage Map Numbers	81, 83, and 84
Stream Mile and Bank	Hiwassee River Miles 19.2 to 29.3B
Land Use/Land Cover	Agricultural fields and upland and bottomland hardwoods
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Term agricultural license for row crop and hay farming

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 255 - (5.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three non-contiguous tracts of land located along the right descending bank of the Hiwassee River. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-255. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	125–SW
TVA D-Stage Map Numbers	81
Stream Mile and Bank	Hiwassee River Miles 20.6 to 21.7R
Land Use/Land Cover	Mixed pine and hardwood trees
Fronts Former TVA Tract(s)	XCR–395, XCR–396, and XCR–397
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 256 - (12.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three non-contiguous tracts of land located along the left and right descending bank of the Hiwassee River. This parcel lies entirely below the 685.44-foot msl contour or the 690-foot msl contour depending on location. The current land cover is primarily mixed pine and hardwood trees and maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been adequately surveyed. Water use facilities

have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-256. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee, McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	125–SW
TVA D-Stage Map Numbers	83
Stream Mile and Bank	Hiwassee River Miles 24.0 to 25.0B
Land Use/Land Cover	Mixed pine and hardwood trees and maintained lawns
Fronts Former TVA Tract(s)	XCR–332, XCR–333, XCR–334, and XCR–398
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 257 - (0.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Hiwassee River. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline and future requests for private water use facilities would be considered.

Table 4-257. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	126–NW
TVA D-Stage Map Numbers	84
Stream Mile and Bank	Hiwassee River 30.5L
Land Use/Land Cover	Mixed pine and hardwood trees
Fronts Former TVA Tract(s)	XCR–335
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 258 - (12.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains portions of the Northeast Upper River Road. The road itself has a low probability for the presence of cultural resources. Most of the ROW has a high probability for the presence of cultural resources and has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-258. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	125–SW
TVA D–Stage Map Numbers	83
Stream Mile and Bank	Hiwassee River Mile 23.9–24.9L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easements to Bradley County, Tennessee for a roadway
Potential Projects	None identified
Potential Partners	Bradley County, Tennessee

Parcel 259 - (0.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a water intake for Hiwassee Utility Commission. The undisturbed portion of this parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-259. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	125–SW
TVA D–Stage Map Numbers	81
Stream Mile and Bank	Hiwassee River Mile 23.2L
Land Use/Land Cover	Water intake
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easements to Hiwassee Utility Commission for a water intake
Potential Projects	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Partners	Bradley County, Tennessee

Parcel 260 - (0.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a water line for Cleveland Utilities. The undisturbed portions of this parcel have a high probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-260. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D–Stage Map Numbers	81
Stream Mile and Bank	Hiwassee River Mile 22.9L
Land Use/Land Cover	Water intake
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Section 26a to Cleveland Utilities for a water intake
Potential Projects	None identified
Potential Partners	Cleveland Utilities

Parcel 261 - (0.3 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is located along the Hiwassee River and is adjacent to former TVA property (XCR-437). This property is utilized by Bowaters Southern Paper Corporation for a water intake. The areas disturbed by the construction of the water intake have a low probability for the presence of cultural resources. The other parts of this parcel have a high probability for the presence of cultural resources and have not been surveyed. Requests for use of TVA lands to support industrial purposes would be considered.

Table 4-261. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	125–SW
TVA D-Stage Map Numbers	81

Location Component and Public Involvement Opportunities	Parcel Specific Information
Stream Mile and Bank	Hiwassee River Mile 22.6L
Land Use/Land Cover	Water intake
Current Agreements/Commitments	None identified

Parcel 262 - (15.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel consists of five noncontiguous tracts of land related to the development of Charleston Greenway in accordance with a master plan prepared in 2011. Portions of the greenway have already been developed under a license agreement with the city of Charleston, Tennessee. The city of Charleston also manages an existing boat-launching ramp on the upstream most segment of the parcel. U.S. Highway 11 and Water Lane Northeast provide access to the parcel.

This parcel has a high probability for the presence of cultural resources, but it has not been adequately surveyed. Historical documents indicate important sites related to the removal of Native Americans from this area (the “Trail of Tears”). Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-262. Parcel Information

Location Component	Parcel Specific Information
County, State	Bradley, Tennessee
TVA D−Stage Map Numbers	81
Stream Mile and Bank	Hiwassee River Mile 18.8L

Parcel 263 - (72.9 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel spans approximately three river miles. Industrial areas, railroads, and other contractual agreements encompass the majority of the parcel. The back-lying land use is heavy industrial with associated vegetative buffers. The portion of this parcel with a low probability for the presence of cultural resources is located between South Mouse Creek miles 1.1 and 1.2R. The remainder of the parcel has either a medium or high probability for the presence of cultural resources. Specifically, the areas that have not been surveyed have a high probability for

cultural resources. Requests for use of TVA lands to support industrial purposes would be considered.

Table 4-263. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	73, 77, 80, and 81
Stream Mile and Bank	Hiwassee River Mile 15.1 to 19L
Land Use/Land Cover	Deciduous forest, industrial area, maintained lawn, and railroads
Current Agreements/Commitments	• Permanent easement to Southern Railway Company for a railroad • Permanent easement to South Central Bell Telephone Company for telephone utilities • Permanent easement to Olin Mathieson Chemical Corporation for a pipeline • Permanent easement to the state of Tennessee for a roadway • Term easement to Colonial Pipeline Company for natural gas utilities

---

Parcel 264 - (0.9 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel is located in the city of Charleston, Tennessee. The land cover is mixed hardwood. This tiny parcel has a high probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-264. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley and McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	81
Stream Mile and Bank	Hiwassee River Mile 18.7L
Land Use/Land Cover	Upland Hardwoods
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Permanent easement for telephone utilities
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Partners	None identified

Parcel 265 - (7.8 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located at the confluence of South Mouse Creek and the Hiwassee River. The land cover is mixed hardwoods with some scattered pine. A smaller portion located upstream is no longer visible above summer pool. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-265. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley and McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	73 and 80
Stream Mile and Bank	Hiwassee River Miles 15.2-16.1L
Land Use/Land Cover	Upland and bottomland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 266 - (12.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is a peninsula at the mouth of South Mouse Creek. It is wooded with bottomland hardwoods and a few scattered pines. Its location creates an island of habitat against a large mowed industrial area and should be protected for that amount of habitat it provides to river-associated wildlife. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-266. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	73 and 80
Stream Mile and Bank	Hiwassee River Mile 15.6L
Land Use/Land Cover	Mixed hardwoods and pines
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 267 - (3.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses four noncontiguous tracts of land contains a portion of the ROW for Old Lower River Road Northwest. While a portion of the parcel is encumbered with agreements for public recreation and wildlife management purposes, the intent of this parcel is support the road ROW. In locations where the road ROW and public recreation or wildlife management are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered.

The actual road has a low probability for the presence of cultural resources. Areas adjacent to the road on the western portion of this parcel have a medium probability for the presence of cultural resources.

Table 4-267. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D–Stage Map Numbers	80
Stream Mile and Bank	South Mouse Creek Mile 2.1L Hiwassee River Mile 15.3L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Permanent easements to the state of Tennessee for roadways • Revocable license to the state of Tennessee for vegetation management
Potential Projects	None identified
Potential Partners	None identified

Parcel 268 - (15.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel extends along the both banks of South Mouse Creek and adjacent to former TVA property (XTCR-39 and XTCR-40) transferred to the state of Tennessee for public recreation. Old River Road NW provides access. The parcel is currently undeveloped. This parcel has a medium to low probability for the presence of cultural resources. A portion of this parcel has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-268. Parcel Information

Location Component	Parcel Specific Information
County, State	Bradley, Tennessee
TVA D−Stage Map Numbers	80
Stream Mile and Bank	Hiwassee River Mile 15.5L

Parcel 269 - (65.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located in the head of South Mouse Creek embayment. It mostly consists of high quality forested, scrub/shrub, emergent, and aquatic bed wetlands. The land cover is primarily bottomland hardwood with some pine and upland hardwoods along the western portion of the parcel. A portion of this parcel was impacted years ago with construction of Interstate 75. Recent industrial construction along the eastern portion has made this habitat even more important to protect. This area is under license to the state of Tennessee for wildlife management as part of the Chickamauga WMA. The habitat provided supports waterfowl and mammals primarily. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-269. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	80
Stream Mile and Bank	South Mouse Creek Mile 2L
Land Use/Land Cover	Bottomland hardwoods, scrub/shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	• Agreement with the state of Tennessee for wildlife management • Term easement to Colonial Pipeline Company for a Gas Utility line • License to Cleveland Utilities for an underground sewer line
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 270 - (6.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses four noncontiguous tracts of land contains a portion of the ROW for Interstate 75. This parcel has a low probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-270. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D–Stage Map Numbers	73 and 80
Stream Mile and Bank	South Mouse Creek Mile 2.1L Hiwassee River Mile 15.3L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Term easement to Colonial Pipeline Company for a natural gas line
Potential Projects	None identified
Potential Partners	None identified

Parcel 271 - (41.0 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This relatively narrow shoreline parcel is the Johnson Bottoms HPA and features habitat for state-listed False foxglove (*Aureolaria patula*). The adjacent private property, formerly owned by Bowater Inc., underwent forest management activities. These adjacent lands are now privately-owned and continue to be used for forest management. A portion of the adjacent private property is used for hay production and grazing. There has also been unauthorized vegetation management occur on this parcel. Most of this parcel has a high probability for the presence of cultural resources. Areas with a steep contour have a medium probability for the presence of cultural resources. Only a portion of this parcel has been surveyed. Requests for private water use facilities would not be considered.

Table 4-271. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley and McMinn, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	72, 73, and 80
Stream Mile and Bank	Hiwassee River Miles 13.2-15L
Land Use/Land Cover	Upland hardwoods and open field
Known Dispersed Recreation Opportunities	Fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 272 - (17.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the left descending bank of the Hiwassee River and right descending bank of Candies Creek. This parcel lies entirely below the 685.44-foot msl contour. W.E. Bryant Subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a high probability for the presence of cultural resources, but it has not

been adequately surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-272. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	72 and 80
Stream Mile and Bank	Hiwassee River Mile13.0L Candies Creek Mile 0.5R
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–315, XCR–316, and XCR–317
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 273 - (3.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

B&B Marina is located adjacent to this parcel, and the property has been licensed to the Marina operators for commercial recreation. Facilities at this marina include boat slips, boat-launching ramp, fuel services, a campground, and picnic facilities. This recreation area is located off Marina Drive NW. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-273. Parcel Information

Location Component	Parcel Specific Information
County, State	Bradley, Tennessee
TVA D−Stage Map Numbers	72
Stream Mile and Bank	Hiwassee River Mile 12.8L

Parcel 274 - (425.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is a large wetland complex in the head of the Candies Creek embayment on the Hiwassee River. Candies Creek runs through the parcel and supports a range of forested, scrub/shrub and some emergent wetlands. The area is managed by TWRA as a component of the Chickamauga WMA. The parcel also contains some levees used for waterfowl sub-

impoundments. The land cover is primarily bottomland hardwoods, with some acreage that once supported upland hardwood and pine mixes. Due to an infestation of southern pine beetles, some salvage operations of the pine occurred. The salvage activities added some early successional cover in scattered locations.

The northern portion of this parcel has a medium probability for the presence of cultural resources. The southern portion has a high probability for the presence of cultural resources. Only a small portion of this parcel has been surveyed. Requests for private water use facilities would not be considered.

Table 4-274. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	72, 75, and 78
Stream Mile and Bank	Candies Creek Miles 0 to 3B
Land Use/Land Cover	Agricultural fields, bottomland hardwoods and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, fishing, and wildlife observation
Current Agreements/Commitments	Agreement to the state of Tennessee for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 275 - (6.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses two noncontiguous tracts of land contains a portion of the ROW for Northwest Lower River Road. Most of this parcel has a low probability for the presence of cultural resources. The northwest portion of this parcel has a medium probability for the presence of cultural resources. A cave is known within 20 feet of this parcel. Requests for private water use facilities would not be considered.

Table 4-275. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D–Stage Map Numbers	75
Stream Mile and Bank	Candies Creek Mile 1.8B Hiwassee River Mile 12L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easements to the state of Tennessee for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 276 - (7.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the right descending bank of Candies Creek. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium to high probability for the presence of cultural resources, but it has not been adequately surveyed. Water use facilities have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-276. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	75
Stream Mile and Bank	Candies Creek Mile 1.5R
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–313
Structure Profile	692-foot mean sea level
Current Agreements/Commitments	None identified

Parcel 277 - (6.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located on the upper end of the Candies Creek embayment and adjoins former TVA property (XTCR-158) transferred to the state of Tennessee for public recreation. Lower River Road provides access to this parcel. The area is currently undeveloped. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-277. Parcel Information

Location Component	Parcel Specific Information
County, State	Bradley, Tennessee
TVA D−Stage Map Numbers	75
Stream Mile and Bank	Hiwassee River Mile 11.0L

Parcel 278 - (15.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Hiwassee River and Candies Creek. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium to high probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-278. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	72 and 75
Stream Mile and Bank	Candies Creek Mile 1.0L Hiwassee River Mile 11.3L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–297, XCR–298, XCR–299, XCR–300, XCR–301, XCR–302, and XCR–303
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 279 - (102.2 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is Ledford Island (sub-section 2.3.3), a historically significant area. The parcel is managed by TWRA as a WMA for waterfowl. The land cover is mostly agricultural fields which are flooded during the winter months. The majority of shoreline has bottomland tree cover. This island has much history with water control levees from TVA's vector control history to the current TWRA's waterfowl management. Access is via a road and causeway from the south shoreline.

This parcel has a high probability for the presence of cultural resources. Only a portion of the parcel has been surveyed. Requests for private water use facilities would not be considered.

Table 4-279. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	72
Stream Mile and Bank	Hiwassee River Mile 12.3L
Land Use/Land Cover	Upland and bottomland hardwoods and agricultural fields
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	Permanent easement to the state of Tennessee for wildlife management
Potential Projects	• Placement on the National Register of Historic Places • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	State of Tennessee

Parcel 280 - (36.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of several islands at the confluence of Candies Creek and the Hiwassee River. This parcel is managed by TWRA as part of the Chickamauga WMA. Bottomland hardwoods and pine trees are the main land cover for these islands. The surrounding shallow water provides good waterfowl habitat in the summer and mudflats in the winter for shorebirds.

This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-280. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE
TVA D-Stage Map Numbers	72
Stream Mile and Bank	Hiwassee River Miles 11 to 12.6L
Land Use/Land Cover	Bottomland hardwoods
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Agreement to the state of Tennessee for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 281 - (0.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This narrow shoreline parcel is former TVA property (XTCR-37) transferred to the state of Tennessee for public recreation. A boat-launching ramp has been developed and accessible from Eads Bluff Road NW. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-281. Parcel Information

Location Component	Parcel Specific Information
County, State	Bradley, Tennessee
TVA D−Stage Map Numbers	72
Stream Mile and Bank	Hiwassee River Mile 11.0L

Parcel 282 - (17.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Hiwassee River. This parcel lies entirely below the 685.44-foot msl contour. Harbor Hills and Hidden Cove subdivisions are located on the back-lying private property. The current land cover

is primarily mixed pine and hardwood trees with maintained lawns. Most of this parcel has a medium probability for the presence of cultural resources. There is a wide portion of the parcel that has a high probability for the presence of cultural resources. This parcel has not had an adequate survey to identify cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-282. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley and Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE and 119–SW
TVA D-Stage Map Numbers	34, 40, and 72
Stream Mile and Bank	Hiwassee River Miles 9.5 to 10.5L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–293, XCR–294, XCR–295, and XCR–296
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 283 - (104.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel *is locally known as Johnson Bottoms. The area is* managed by TWRA as a waterfowl sub-impoundment and component of the Chickamauga *WMA*. Access is via a causeway on the south side of the island. Crops are established during the summer, then the area is flooded to provide winter habitat for migrating waterfowl. The island also includes some shallow water and mudflat areas on the downstream side. There is a high probability for the presence of cultural resources in this parcel. Much, but not all, of this parcel has been surveyed. Requests for private water use facilities would not be considered.

Table 4-283. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bradley and Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SE and 119–SW
TVA D-Stage Map Numbers	34, 39, and 40
Stream Mile and Bank	Hiwassee River Miles 7 to 10L
Land Use/Land Cover	Bottomland hardwoods, scrub/shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Wildlife observation

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	Agreements to the state of Tennessee for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 284 - (3.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel adjoins former TVA property (XTCR-34) transferred to the state of Tennessee for public recreation. The area is currently undeveloped. The site is accessible from SR-306. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-284. Parcel Information

Location Component	Parcel Specific Information
County, State	Meigs, Tennessee
TVA D−Stage Map Numbers	34
Stream Mile and Bank	Hiwassee River Mile 9.2L

Parcel 285 - (4.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for Brittsville Road. While a portion of the parcel is located adjacent to former TVA property (XTCR-34 and XTCR-97) which was transferred to the state of Tennessee for public recreation and wildlife management purposes, the intent of this parcel is support the road ROWs. In locations where the road ROWs and adjacent land use are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed.

Table 4-285. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SW

Location Component and Public Involvement Opportunities	Parcel Specific Information
TVA D–Stage Map Numbers	34
Stream Mile and Bank	Hiwassee River Mile 9L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easements to Tennessee Department of Transportation for roadways • Permanent easement to the state of Tennessee for public recreation
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 286 - (101.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is locally known as Sugar Creek. The area provides a multitude of habitats: agricultural fields, upland hardwood sites, and forested, scrub/shrub and emergent wetlands. This parcel is managed by TWRA as a portion of the Chickamauga WMA and supports fish rearing ponds. The area provides extensive mudflats during the winter for shorebirds. Portions of this parcel not impacted by the fish hatchery have a medium probability for the presence of cultural resources. None of this parcel has been surveyed. Requests for private water use facilities would not be considered.

Table 4-286. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SW
TVA D-Stage Map Numbers	34
Stream Mile and Bank	Hiwassee River Mile 9L
Land Use/Land Cover	Bottomland hardwoods and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Agreement to the state of Tennessee for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 287 - (16.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of four non-contiguous tracts of land located along the left descending bank of the Hiwassee River. This parcel lies entirely below the 685.44-foot msl contour. Brittsville Shores subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-287. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SW
TVA D-Stage Map Numbers	34 and 39
Stream Mile and Bank	Hiwassee River Mile 7.4 - 8.9L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–283, XCR–284, XCR–285, XCR–287, XCR–288, XCR–289, XCR–290, and XCR–291
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 288 - (48.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of three noncontiguous tracts of land.

This main portion of this parcel is located at Hiwassee River Mile 8.2L. It is a wooded tract containing two stands of about equal acreage. The forest cover is mostly upland hardwoods on the eastern half, and a poorer quality stand of red cedar and post oak cover on the western section. The parcel provides for public use and fair habitat for wildlife. There has been historic unauthorized vegetation removal along the eastern portion of the parcel.

The two smaller portions of this parcel are located downstream at the SR-58 bridge. The island provides high-quality wetlands with wintertime mudflats surrounding it.

The largest portion of this parcel has a medium probability for the presence of cultural resources and has not been surveyed. Two smaller portions have a low probability for the presence of cultural resources and have been surveyed. Requests for private water use facilities would not be considered.

Table 4-288. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SW
TVA D-Stage Map Numbers	39
Stream Mile and Bank	Hiwassee River Miles 7.2 to 8.5L
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Wildlife observation and bank fishing
Current Agreements/Commitments	Permanent easement to Tennessee wildlife Resources Agency for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 289 - (3.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel managed under a revocable license to Meigs County, Tennessee for public recreation. Amenities include a boat-launching ramp and picnic facilities. This area is accessible from SR-58. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. The integrity of any remaining cultural resources depends on the level of disturbance caused by the development of the recreation infrastructure. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-289. Parcel Information

Location Component	Parcel Specific Information
County, State	Meigs, Tennessee
TVA D−Stage Map Numbers	39
Stream Mile and Bank	Hiwassee River Mile 7.5L

Parcel 290 - (14.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the left descending bank of the Hiwassee River and the right descending bank of Gunstocker Creek. This parcel lies entirely below the 685.44-foot msl contour. Rockholt, Riverview Estates, and Windmill Lake Estates subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-290. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SW
TVA D-Stage Map Numbers	39
Stream Mile and Bank	Gunstocker Creek Mile 0.1R Hiwassee River Mile 7.0L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–276, XCR–277, XCR–278, XCR–280, XCR–281, and XCR–282
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 291 - (5.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located on the right bank of Gunstocker Creek, near the confluence of the Hiwassee River. The parcel is adjacent to SR-58 and Eastview Road. The parcel contains mixed hardwood and red cedar. On the northwest side of this parcel is a large mudflat during winter drawdown along with wetlands along the forest stand. This parcel is managed by TWRA as a portion of the Hiwassee Refuge. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-291. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SW
TVA D-Stage Map Numbers	39
Stream Mile and Bank	Hiwassee River Mile 7L
Land Use/Land Cover	Mixed hardwoods
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Agreement with the state of Tennessee for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 292 - (238.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along both banks of Gunstocker Creek near the confluence with the Hiwassee River. The diverse habitats provided on this parcel support a wide range of wildlife. The land cover ranges from upland hardwood with some pockets of pine, agricultural fields, and wetland complexes. Portions of this parcel are adjacent to former TVA property (XTCR-93) transferred to the state of Tennessee for wildlife management, and subsequently, the parcel is managed by TWRA as part of the Hiwassee Refuge. This parcel has a high probability for the presence of cultural resources but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-292. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–SW
TVA D-Stage Map Numbers	33 and 39
Stream Mile and Bank	Hiwassee River Mile 6.5L
Land Use/Land Cover	Agricultural fields, uplands hardwoods, bottomland hardwoods, and emergent wetlands
Known Dispersed Recreation Opportunities	Wildlife observation

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	Permanent easement to Tennessee Wildlife Resources Agency for wildlife management License to Tennessee Wildlife Resources Agency for wildlife management
Potential Projects	Placement of TVA property and public lands signs along the parcel boundary and shoreline Refresh the existing paint denoting TVA's property boundary Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 293 - (735.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel stretches six miles along the left descending bank of the Hiwassee River. The area is managed by TWRA as part of the Hiwassee Refuge. The parcel contains both large individual tracts, and some long narrow tracts. TVA and TWRA have collaborated to conduct forest management on selected areas. In 2000, both agencies salvaged large sawtimber pines that were infested with southern pine beetles. The salvages resulted is a more diverse wildlife habitat component; some areas supporting large mature upland hardwoods; and regeneration areas providing early successional cover. These early successional areas are regenerating into naturally reseeded pine and upland hardwood.

This parcel has a high probability for the presence of cultural resources, but only a small portion has been surveyed. It is adjacent to a very significant historic site, Blythe Ferry. Agricultural practices under license should be reviewed before the license is renewed. Bald eagles have been recorded within this parcel. Requests for private water use facilities would not be considered.

Table 4-293. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE, 119–NW, and 119–SW
TVA D-Stage Map Numbers	39, 43, 44, and 48
Stream Mile and Bank	Hiwassee River Miles 0.5 to 6L
Land Use/Land Cover	Upland hardwoods, bottomland hardwoods, agricultural fields and emergent wetlands

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	Agreements with the state of Tennessee for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 294 - (4.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for Blythe Ferry Road. This parcel encompasses four noncontiguous tracts and crosses Birchwood Creek, Grasshopper Creek, and Lick Branch. While a portion of the parcel is located adjacent to former TVA property (XTCR-93) which was transferred to the state of Tennessee for wildlife management purposes, the intent of this parcel is support the road ROWs. In locations where the road ROWs and wildlife management are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered. This parcel has a low probability for the presence of cultural resources.

Table 4-294. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	119–NW and 119–SW
TVA D–Stage Map Numbers	33 and 44
Stream Mile and Bank	Hiwassee River Mile 9L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easement to the state of Tennessee for a roadway • Revocable license to the state of Tennessee for a wildlife management area • Revocable license to Volunteer Electric Cooperative for electric utilities
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 295 - (36.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

Cherokee Memorial Park, a national historic site, is located on this parcel. This area includes exhibits and interpretive facilities related to the Trail of Tears. A boat-launching ramp has also been developed on a part of this parcel. The area is operated by Meigs County, Tennessee under a term easement. Cherokee Memorial Park is located off Blythe Ferry Road. There is a high probability for the presence of cultural resources in this parcel. The parcel has had a survey. This area has great cultural significance to Native Americans. A population of Alabama snow-wreath (*Neviusia alabamensis)* a state threatened species has been recorded on this parcel. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-295. Parcel Information

Location Component	Parcel Specific Information
County, State	Meigs, Tennessee
TVA D−Stage Map Numbers	43
Stream Mile and Bank	TRM 499.5L

Parcel 296 - (13.8 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Blythe Ferry Cave HPA. The area is located adjacent to the historic Blythe Ferry which is registered on the NRHP site and near the Cherokee Removal Memorial Park. This parcel features a 1.5 mile trail that traverses along the reservoir winding through 100 year old upland hardwood forest and wildflowers. A cave located on the tract is used seasonally by gray bats (Myotis grisescens) and is a priority 2 cave in the gray bat recovery plan. Additionally, Tennessee cave salamander, a state threatened species, and the Berry Cave salamander, a federal species of concern and a state threatened species, have been recorded in this cave. Human disturbance is adversely impacting the bat population here, therefore a gate was installed at the cave to try to prevent human entry. This parcel has a high probability for the presence of cultural resources, but only a small portion has been surveyed. Requests for private water use facilities would not be considered.

Table 4-296. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D-Stage Map Numbers	43 and 47
Stream Mile and Bank	TRM 499.2L
Land Use/Land Cover	Upland hardwood forest
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Continue efforts to protect endangered species located on this tract • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 297 - (0.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located downstream of the abandoned Blythe Ferry site and encompasses a safety landing. Safety landings are available for barges and recreational boats during adverse weather conditions or equipment malfunction. Future development of this tract would be restricted to support navigational purposes. This parcel has a high probability for the presence of cultural resources, but has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-297. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D-Stage Map Numbers	43
Stream Mile and Bank	TRM 499.3R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 298 - (12.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. McArthur L.H and River Place subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-298. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D-Stage Map Numbers	43
Stream Mile and Bank	TRMs 497.3 to 498.8L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–97, XCR–98, XCR–99, XCR–100, and XCR–101
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 299 - (4.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located in the Bear Branch embayment and adjacent to former TVA property (XTCR-17) transferred to the state of Tennessee for public recreation. A ramp has been developed at this location. The site is accessible from Shahan Road. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-299. Parcel Information

Location Component	Parcel Specific Information
County, State	Meigs, Tennessee
TVA D−Stage Map Numbers	43
Stream Mile and Bank	TRM 497L

Parcel 300 - (0.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This small parcel contains a portion of the ROW for Shahan Road. This parcel encompasses two noncontiguous tracts and crosses Bear Branch. While a portion of the parcel is located adjacent to former TVA property (XTCR-17) which was transferred to the state of Tennessee for public recreation purposes, the intent of this parcel is support the road ROWs. In locations where the road ROWs and public recreation are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered. This parcel has a low probability for the presence of cultural resources.

Table 4-300. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE
TVA D–Stage Map Numbers	43
Stream Mile and Bank	TRM 497L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Revocable license to the state of Tennessee for a vegetation management
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 301 - (2.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along both banks of Bear Branch. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-301. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE

Location Component and Public Involvement Opportunities	Parcel Specific Information
TVA D-Stage Map Numbers	43
Stream Mile and Bank	Bear Branch Mile 0.7RL
Land Use/Land Cover	Mixed pine and hardwood trees
Fronts Former TVA Tract(s)	XCR–96
Structure Profile	690-foot mean sea level
Current Agreements/Commitments	None identified

Parcel 302 - (25.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour or the 690-foot msl contour, depending on location. Bluff View, Mallard Point, Bear Creek, and River Haven subdivisions are located on the back-lying private land. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-302. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE and 111–NE
TVA D-Stage Map Numbers	37 and 43
Stream Mile and Bank	TRMs 495.0 to 497.1L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–88, XCR–89, XCR–90, XCR–91, XCR–92, XCR–93, XCR–94, XCR–95, and XCR–484
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 303 - (3.1 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small island parcel is located downstream from Dry Branch near Shahan Slough. The island provides only limited amounts of wildlife habitat. A narrow band of aquatic bed and emergent wetlands are located along the shoreline. The land cover is predominantly bottom-

land hardwood. This parcel has a high probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-303. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton and Meigs, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–NE and 11–SE
TVA D-Stage Map Numbers	37 and 43
Stream Mile and Bank	TRM 496.6L
Land Use/Land Cover	Bottomland hardwoods and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, fishing, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	Placement of TVA property and public lands signs along the parcel boundary and shoreline
Potential Partners	None identified

Parcel 304 - (8.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is adjacent to former TVA property (XTCR-67) transferred to the state of Tennessee for public recreation. This area receives some informal recreation use, but the parcel is currently undeveloped. The site is accessible from Parker Loop Road. This parcel has a high probability for the presence of cultural resources but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-304. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−State Map Numbers	37
Stream Mile and Bank	TRM 494.5L

Parcel 305 - (259.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is composed of mature upland hardwood. At one time, significant pine sawtimber were present on the parcel, but in 2001, several pine trees were salvaged due to the southern pine beetle epidemic. The parcel has a few areas where hardwoods have suffered

wind throw, but the forest is overall healthy and offers great dispersed recreation, mostly hunting. Good road access and productive soils are helpful to provide a healthy forest and wildlife. The site has a predominant southeast aspect that borders Grasshopper Creek. A significant emergent/scrub-shrub wetland exists along the southern end of the parcel. This parcel has a medium probability for the presence of cultural resources, but has not been surveyed for cultural resources. One known historic cemetery is present in this parcel. Requests for private water use facilities would not be considered.

Table 4-305. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	32 and 37
Stream Mile and Bank	TRM 494L
Land Use/Land Cover	Upland hardwoods, scrub/shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, informal hiking, and wild observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 306 - (46.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

Grasshopper Creek Recreation Area is located on this site. This area was initially developed and operated by TVA but is now operated by the private sector under a revocable license agreement. Facilities at this area include a campground, boat-launching ramp, picnic facilities, swimming beach, and a rental cabin. The area is located off Parker Loop Road. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-306. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	32
Stream Mile and Bank	TRM 494.2L

Parcel 307 - (13.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of Grasshopper Creek. This parcel lies entirely below the 685.44-foot msl contour. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have not been permitted along the shoreline. Future requests for private water use facilities would be considered.

Table 4-307. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE,
TVA D-Stage Map Numbers	32
Stream Mile and Bank	Grasshopper Creek Mile 1.7L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–85, XCR–86, and XCR–87
Structure Profile	690-mean sea level
Current Agreements/Commitments	None identified

Parcel 308 - (202.1 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Grasshopper Creek SWA and provides habitat for large populations of federally listed large-flowered skullcap (*Scutellaria montana*) as well as state listed American ginseng (*Panax quinquefolius*).

This large parcel is located on the left descending bank of Grasshopper Creek at the confluence of the Tennessee River. The western aspect of the parcel encompasses approximately one mile of shoreline along the Tennessee River. The portion of the parcel along Grasshopper Creek has a north/northeast aspect. Historically, forest management has occurred on this parcel. It once

supported upland hardwood and pine, but the pine component was removed by southern pine beetles in the early 2000's. Forest management activities include group selection and thinning harvests. The parcel is bordered almost entirely by former Bowater Inc. property, but is now privately owned and still used for forest management.

The parcel provides very good habitat for upland wildlife species and excellent wildlife food production capability. Most of the forest stands hold impressive-sized hardwoods, with a good mixture of various aged trees included. The numerous large trees with cavities serve as nesting and den sites for wood ducks, squirrels, raccoons and woodpeckers. This parcel provides for excellent dispersed recreation, mostly hunting. While no public road access exists, the reduced user pressure is a positive attribute for users that access by boat. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-308. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	32
Stream Mile and Bank	TRM 493.5L
Land Use/Land Cover	Upland hardwood Forest
Known Dispersed Recreation Opportunities	Hunting, fishing, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 309 - (14.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 690-foot msl contour. Crestview subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Water use

facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-309. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	29 and 32
Stream Mile and Bank	TRMs 492 to 493L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–482, XCR–483, XCR–578, XCR–579, XCR–580, XCR–581, and XCR–582
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 310 - (150.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel provides many natural resource amenities. The parcel is large in size and consists of two tracts of land bisected by a slough. Active natural resource management of the forests and wildlife habitat has historically been implemented. One small woods road on the northern portion provides for public foot access. This road was open for many years, but due to unauthorized all-terrain vehicle use, TVA closed the road.

Numerous forest management activities have been conducted over the years to provide age-class diversity to the tree cover. Southern pine beetle infestations in 2000 had a heavy impact on the pine trees. Several salvage operations were conducted and natural regeneration of hardwoods and pine are reforesting the sites. The land cover ranges from old-age hardwood stands; remnant pine; young pine; and young hardwoods. This diverse habitat provides excellent wildlife benefits, from hard and soft mast to nesting/escape cover. This parcel receives good public use which includes hunting, bank fishing, camping on the shoreline and walking. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. One historic cemetery is known to be within this parcel. Requests for private water use facilities would not be considered.

Table 4-310. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	26 and 29
Stream Mile and Bank	TRMs 490 to 491.6L
Land Use/Land Cover	Upland hardwoods and pines
Known Dispersed Recreation Opportunities	Hunting, bank fishing, primitive camping, and informal hiking
Current Agreements/Commitments	• License to Volunteer Electric Cooperative for electric utility line • License to Savannah Valley Utility District for a water line
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 311 - (6.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This small parcel encompasses three noncontiguous tracts of land and contains a portion of the ROW for Eldridge Road. The road itself has a low probability for the presence of cultural resources. This parcel intersects a parcel that has a medium probability for the presence of cultural resources, but has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-311. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D–Stage Map Numbers	29
Stream Mile and Bank	TRMs 491 to 491.6L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to the state of Tennessee for a roadway • Revocable license agreement to Savannah Valley Utility District for water utilities • Revocable license to Volunteer Electric Cooperative for electric utilities

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	None identified
Potential Partners	State of Tennessee, Savannah Valley Utility District, and Volunteer Electric Cooperative

Parcel 312 - (198.8 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Murphy Hill HPA featuring a steep bluff that fronts the Tennessee River with moderate topography and highly productive soils. There is habitat for large populations of federally listed large-flowered skullcap (*Scutellaria montana*), and the bluffs are utilized by wintering bald eagles.

This parcel has many natural resource amenities. It is large in size and mainly consists of a ridge running northeast/southeast. There is a steep slope and northwest aspect along the Tennessee River. The larger portion of the parcel has a southeast aspect. Active management of the forests and wildlife habitat are complementary of the sensitive resources present on the parcel. Existing roads are maintained for public foot traffic and TVA access for resource management activities. Unauthorized horse trails have occurred on the property.

Numerous forest management activities have been conducted over the years to provide age-class diversity to the tree cover. Southern pine beetle infestations in 2000 had a heavy impact on the extremely large pine sawtimber. Several salvage operations were conducted with heavy natural pine regeneration reforesting the sites. The land cover range from old-age hardwood stands; remnant pine; young pine; and young hardwood stands. An approximate seven field is kept in early successional stage to provide good wildlife habitat. This diverse habitat provides excellent wildlife benefits, from hard and soft mast to nesting/escape cover. This parcel receives good public use which includes hunting, camping on the shoreline and walking.

This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. There is a known historic cemetery present. Requests for private water use facilities would not be considered.

Table 4-312. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	26 and 29
Stream Mile and Bank	TRMs 489.2 to 491L
Land Use/Land Cover	Mixed hardwood forest and pines
Known Dispersed Recreation Opportunities	Hunting, hiking, primitive camping, and bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Continued efforts to eliminate unauthorized horseback riding • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 313 - (3.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is adjacent to former TVA property (XTCR-12) transferred to the state of Tennessee for public recreation. A boat-launching ramp has been developed on the parcel. The area is accessible from Thatch Road. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-313. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−State Map Numbers	26
Stream Mile and Bank	TRM 490.0L

Parcel 314 - (16.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour or the 690-foot msl contour, depending on location. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of

cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-314. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	26
Stream Mile and Bank	Tennessee River 489.5L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–75, XCR–76, XCR–77, and XCR–78
Structure Profile	690-mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 315 - (24.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel contains two small islands and a significant amount of shoreline. Some areas have agricultural use, and the remainder of the parcel is mixed hardwood cover. There are small pine components on the western portion of the upstream island. The slough, in the center of this parcel, supports aquatic bed wetlands with associated riparian habitat which supports waterfowl and shorebird use. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-315. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	26
Stream Mile and Bank	TRM 489.5L
Land Use/Land Cover	Upland hardwood and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Partners	None identified

Parcel 316 - (4.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour or the 690-foot msl contour, depending on location. Mullins Sound and Crestwood Harbor subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-316. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE and 112–SE
TVA D-Stage Map Numbers	25 and 26
Stream Mile and Bank	Tennessee River 489.0L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–72, XCR–73, XCR–74, XCR–471, and XCR–510
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 317 - (49.2 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Ware Branch Bend HPA featuring a steep, rocky shoreline, with large bluffs. The mature hardwoods provide excellent perching sites for bald eagles. This parcel also supports a population of the federally listed plant large-flowered skullcap (*Scutellaria montana*). This parcel has a medium probability for the presence of cultural resources, but most of it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-317. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111SE
TVA D-Stage Map Numbers	23, 26D
Stream Mile and Bank	TRM 488.0L
Land Use/Land Cover	Upland hardwood
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	Revocable license to Volunteer Electric Cooperative for a utility distribution line
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None Identified

Parcel 318 - (16.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. Ware Branch and Willow Point subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-318. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	23
Stream Mile and Bank	Tennessee River 486.8L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–426
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 319 - (435.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is a portion of the former Friendship Forest with large upland hardwoods. The parcel was under license to the University of Tennessee (UT) for approximately 30 years and used for forest management research. A unique feature of this parcel is a planted hardwood stand located southwest of the hay field along Hinkle Road. In the 1950's, TVA and UT partnered and planted several species of hardwood as an experiment. The most prevalent remnants of this area are Chinese chestnut and black walnut trees. These black walnut trees are known for having thin shells. These annual crop of these walnuts and chestnuts have been popular picking for locals over the years.

At one time, the tract had a significant pine component (loblolly and shortleaf). Around 2001, east Tennessee was experiencing a historic epidemic of southern pine beetle infestations. At this time, UT discontinued management the property, and TVA salvaged all remaining merchantable pine. TVA's salvaging operations also addressed danger trees posing a threat to adjacent property owners. A population of the federally listed plant large-flowered skull cap (*Scutellaria montana*) has been recorded in this parcel.

The western portion of the parcel contains an agricultural field licensed for hay crops and adjacent to Ware Branch/Thatch Road. A small cemetery is located in the south west border of this field. The agricultural field offers valuable habitat diversity. Hunting, bank fishing and some camping are the primary uses of this parcel.

Several pull-offs along Ware Branch/Thatch Road are popular with the bank fishermen. A nice parking area was recently installed for the public on the south side of Ware Branch/Thatch Road, just west of Birchwood Pike. During this project, unauthorized use and access of a dirt road was corrected and several dumping sites were cleaned up. This road provides the public great foot access into the property, along with access for TVA to maintain the TLs to the south. Dominated by TVA TLs, this area remains in early successional habitat. Unauthorized off-road use and dumping were problems at one time however TVA's attention to keeping the dumps cleaned up and signage has greatly reduced abuses to this area. This area is dominated by grass, shrubs and saplings, mostly comprised of hardwood, pine and some red cedar.

This parcel has a medium to high probability for the presence of cultural resources. Portions of this parcel have been surveyed. Historic homesteads and a cemetery are known to exist within

this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-319. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE and 112–NE
TVA D-Stage Map Numbers	23 and 26
Stream Mile and Bank	TRM 485.8L
Land Use/Land Cover	Upland hardwood
Known Dispersed Recreation Opportunities	Hunting, fishing, and primitive camping
Current Agreements/Commitments	License to Volunteer Electric Cooperative for electric utility line
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 320 - (16.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses eight noncontiguous tracts of land and contains portions of ROW for SR-312 and Thatch Road. While a portion of the parcel is located adjacent to former TVA property (XTCR-6 and XTCR-7) which was transferred to the state of Tennessee for public recreation purposes, the intent of this parcel is support the road ROWs. In locations where the road ROWs and public recreation are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered. The road itself has a low probability for the presence of cultural resources. Areas to either side of the road have a moderate probability for the presence of cultural resources.

Table 4-320. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE and 112–NE
TVA D–Stage Map Numbers	21, 23, and 26
Stream Mile and Bank	TRM 495 to 487.5L
Land Use/Land Cover	Road right-of-way

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to the state of Tennessee for a roadway Revocable licenses to Volunteer Electric Cooperative for electric utilities
Potential Projects	None identified
Potential Partners	State of Tennessee and Volunteer Electric Cooperative

Parcel 321 - (2.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is located along Ware Branch and adjoins former TVA property (XTCR-7 and XTCR-56) transferred to the state of Tennessee for public recreation. A boat-launching ramp has been developed on the parcel. The area is accessible from Thatch Road. This parcel has a low probability for the presence of cultural resources. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-321. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	23
Stream Mile and Bank	TRM 486.2L

Parcel 322 - (6.6 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is a portion of the former Friendship Forest. It is a small tract with very large upland hardwoods. This parcel is bordered on the east by one agricultural field licensed for hay, with the woodland supporting large-flowered skullcap (*Scutellaria montana*). This parcel has a medium probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-322. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE
TVA D-Stage Map Numbers	23
Stream Mile and Bank	TRM 485.9L
Land Use/Land Cover	Upland hardwood
Known Dispersed Recreation Opportunities	Fishing and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 323 - (11.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. Ware Branch Cove and Hinkle subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-323. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE and 112–NE
TVA D-Stage Map Numbers	23
Stream Mile and Bank	TRM 486.0L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–43
Structure Profile	690-mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 324 - (22.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the Tennessee River and is encumbered by a TL ROWs. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-324. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE and 112–NE
TVA D–Stage Map Numbers	23
Stream Mile and Bank	Tennessee River 485.5R
Land Use/Land Cover	Transmission line right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license to Volunteer Electric Cooperative for electrical utilities
Potential Projects	None identified
Potential Partners	None identified

Parcel 325 - (155.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is a portion of the former Friendship Forest with large upland hardwoods. The parcel was under license to the University of Tennessee (UT) for approximately 30 years and used for forest management research. At one time, the tract had a significant pine component (loblolly and shortleaf). Around 2001, east Tennessee was experiencing a historic epidemic of southern pine beetle infestations. At this time, UT discontinued management the property, and TVA salvaged all remaining merchantable pine. TVA's salvaging operations also addressed danger trees posing a threat to adjacent property owners.

Three agricultural fields are licensed for hay crops, and the fields are located north of Skull Island on the west side of Birchwood Pike. These small fields offer valuable habitat diversity to this parcel. Hunting, bank fishing and some camping are the primary uses of this parcel. West of Birchwood Pike, this parcel supports a population of the federally listed large-flowered skullcap (*Scutellaria montana*). Other than small hay fields, this parcel is dominated by large upland hardwoods, with an occasional pine tree or group of pines that escaped the southern pine

beetle infestations. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed.

No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-325. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	111–SE and 112–NE
TVA D-Stage Map Numbers	21 and 23
Stream Mile and Bank	TRM 485.5L
Land Use/Land Cover	Upland hardwood and agricultural fields
Known Dispersed Recreation Opportunities	Hunting, fishing, primitive camping, and informal hiking
Current Agreements/Commitments	Term agricultural license for hay production
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 326 - (18.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

Skull Island Campground is located on this parcel. This area was initially developed and managed by TVA but is now operated by the private sector under a license agreement. Amenities include a campground, swimming beach, and a boat-launching ramp. The area is located off Birchwood Pike. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-326. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	23
Stream Mile and Bank	TRM 485L

Parcel 327 - (0.9 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located on Skull Island and is a buffer for the historic cemetery located on the Island. This parcel should be protected and there should be absolutely no camping or other forms of land disturbance inside this parcel. This parcel has a high probability for the presence of cultural resources. Specifically, there is a known historic cemetery in this parcel. Requests for private water use facilities would not be considered.

Table 4-327. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	23
Stream Mile and Bank	TRM 485.2L
Land Use/Land Cover	Upland hardwoods and maintained lawn
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Placement of TVA property and no disturbance signs along the parcel
Potential Partners	None identified

Parcel 328 - (1.5 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel shown as three small islands, however one of the smallest islands on the end has eroded away, leaving two existing islands. Vegetation cover is mixed hardwoods and pine, with varied understory and some evidence of camping on the larger portion. These islands provide a visual buffer, and important nesting/wading habitat for waterfowl and shorebirds. This parcel has a medium probability for the presence of cultural resources, but it has not been adequately surveyed. Requests for private water use facilities would not be considered.

Table 4-328. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	21
Stream Mile and Bank	TRM 485.1L

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Mixed hardwoods and pines
Known Dispersed Recreation Opportunities	Primitive camping and fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	None identified

Parcel 329 - (12.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is adjacent to former TVA property (XTCR-6) transferred to the state of Tennessee for public recreation. The site is undeveloped but receives some informal recreation use. The area is accessible from Birchwood Pike. This parcel has a low to medium probability for the presence of cultural resources. Only a portion of this parcel has been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-329. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	21
Stream Mile and Bank	TRM 484.8L

Parcel 330 - (5.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 690-foot msl contour. Sunset Landing subdivision is located on the back-lying private property. The current land cover is primarily maintained lawns. The southern half of this parcel has a low probability for the presence of cultural resources. The northern half of this parcel has a medium probability for the presence of cultural resources. It has not been adequately surveyed for cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-330. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	21
Stream Mile and Bank	TRM 484.7L
Land Use/Land Cover	Maintained lawns
Fronts Former TVA Tract(s)	XCR–40
Structure Profile	690 mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 331 - (15.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is Chigger Point HPA. The area is relatively small and steep wooded supporting a population of the federally listed plant large-flowered skullcap (*Scutellaria montana*). Informal trails enter parcel, and surrounding land use is residential development. Some residential structures are on the property line, and unauthorized clearing onto this parcel continues to be a concern. The parcel is a highly visible focal point along the Tennessee River. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-331. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	21
Stream Mile and Bank	TRM 484.4L
Land Use/Land Cover	Upland hardwood
Known Dispersed Recreation Opportunities	Informal hiking and bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Continue efforts to eliminate unauthorized vegetation removal • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 332 - (14.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 690-foot msl contour. Sunset Landing subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwoods with maintained lawns. This parcel has a medium to high probability for the presence of cultural resources, but it has not been adequately surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-332. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	18, 20, and 21
Stream Mile and Bank	Tennessee River 483.5L
Land Use/Land Cover	Mixed pine and hardwood with maintained lawns
Fronts Former TVA Tract(s)	XCR–419, XCR–420, XCR–421, and XCR–422
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 333 - (0.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the Tennessee River and is encumbered by a significant number of TL ROWs supporting Sequoyah Nuclear Plant. This parcel has a low to medium probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-333. Parcel Information

Location Component and Public Involvement Opportunities	**Parcel Specific Information**
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D–Stage Map Numbers	20
Stream Mile and Bank	Tennessee River 485.5R
Land Use/Land Cover	Transmission line right-of-way
Known Dispersed Recreation Opportunities	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 334 - (9.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of four non-contiguous tracts of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour or the 690-foot msl contour, depending on location. Cape Haven and Hamilton Island subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwoods with maintained lawns. This parcel has a low to medium probability for the presence of cultural resources, but it has not been adequately surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-334. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	18 and 20
Stream Mile and Bank	Tennessee River 483L
Land Use/Land Cover	Mixed pine and hardwood with maintained lawns
Fronts Former TVA Tract(s)	XCR–415, XCR–416, XCR–418, and XCR–419
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 335 - (0.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of ROW for Cape Haven Drive. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. However, requests for private water use facilities would not be considered.

Table 4-335. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D–Stage Map Numbers	18 and 20
Stream Mile and Bank	TRM 483.2L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to a private individual for a roadway • Revocable license to Volunteer Electric Cooperative for electric utilities
Potential Projects	None identified
Potential Partners	State of Tennessee and Volunteer Electric Cooperative

Parcel 336 - (8.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This is a narrow tract consisting of three parcels. The portion to the west has been heavily manicured by the adjoining residents. The portion to the east contains road easements and a utility line. The southern portion is a narrow strip between Harrison Bay Road and the Reservoir. It receives a great deal of informal day use. The site has potential for informal recreation use and one dispersed recreation site was enhanced in 2001. The narrow parcel adjacent to Harrison Bay Road is highly visible and provides a scenic buffer between the road and the Reservoir.

Portions of this parcel have a medium probability for the presence of cultural resources. Other very steep portions have a low probability for the presence of cultural resources. This parcel has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-336. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	18 and 20
Stream Mile and Bank	TRM 483.1L
Land Use/Land Cover	Mixed hardwood/pine

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	License to Volunteer Electric Cooperative for electric utility line
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 337 - (35.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for SR-58. While a portion of the parcel is located adjacent to former TVA property (XTCR-41) which was transferred to the state of Tennessee for public recreation and the establishment of Harrison Bay State Park, the intent of this parcel is support the road ROWs. In locations where the road ROWs and adjacent land use are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered.

The road itself within this parcel has a low probability for the presence of cultural resources. This road, however, is adjacent to areas with a medium to high probability for the presence of cultural resources.

Table 4-337. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW and 112–NE
TVA D–Stage Map Numbers	6 and 10
Stream Mile and Bank	TRM 478L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	Harrison Bay State Park

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	Permanent easement to Eastside Utility District for a pipeline Permanent easement to Loret Resort Villa for a marina Permanent easements to the state of Tennessee for roadways Permanent easement to the state of Tennessee for recreation Revocable license to Chattanooga Electric Power Board for electric utilities Revocable license for a park
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 338 - (4.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of two small tracts of land and located between Harrison Bay Road and the Tennessee River. The area receives a great deal of informal day use, and adjacent homeowners have partner with TVA to keep the litter picked up. TVA has invested minimal upgrades to these sites to include: maintenance of trees that pose a safety hazard, installation of garbage cans, and shoreline stabilization. These areas with minimal investment will continue to provide the public with nice access areas. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-338. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	18
Stream Mile and Bank	TRM 482.5L
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 339 - (2.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel receives informal recreation use including boat launching, fishing, and picnicking. Neighborhood residents help maintain the area under a letter agreement with TVA. This area is located adjacent to Harrison Bay Road. This parcel has a medium probability for the presence of cultural resources. A portion of this parcel has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-339. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	18
Stream Mile and Bank	TRM 482.5L

Parcel 340 - (490.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel includes Harrison Bay State Park. The majority of the parcel is adjacent to former TVA property (XTCR-41) transferred to the state of Tennessee for state park development. The parcel also includes several islands managed by the state under a permanent easement (XTCR-119RE). Recreation facilities at Harrison Bay State Park include a campground, trails, picnic areas, a swimming pool, a marina, boat-launching ramps, and a golf course. The park is accessible from SR-58. Additional information concerning Harrison Bay State Park can be found at http://tnstateparks.com/parks/about/harrison-bay. One occurrence of a great egret, state listed as in need of management, has been recorded on this parcel.

This parcel has a high probability for the presence of cultural resources. Some portions have been surveyed, but most have not. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-340. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	9, 10, and 13
Stream Mile and Bank	TRMs 477.5 to 482.2L

Parcel 341 - (25.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three non-contiguous tracts of land located along the right descending bank of Savannah Creek and Wolftever Creek. This parcel lies entirely below the 685.44-foot msl contour or the 690-foot msl contour, depending on location. Ben Crawford, Summer Haven, Wolftever Fishing Club, Emanon Club, Dogwood Acres, Island Point Estates, and Savannah Shores subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwoods with maintained lawns. This parcel has a medium probability for the presence of cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-341. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	14
Stream Mile and Bank	Wolftever Creek Miles 4.2 to 5R and Savannah Creek Miles 0 to 1.4R
Land Use/Land Cover	Mixed pine and hardwood with maintained lawns
Fronts Former TVA Tract(s)	XCR–406, XCR–407, XCR–408, XCR–409, XCR–410, XCR–412, and XCR–413
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 341a - (0.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel represents an area where the appropriate rights for private water use facilities do not exist. This parcel has a low probability for the presence of undisturbed cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-341a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	14
Stream Mile and Bank	TRM Opposite 477.7L
Land Use/Land Cover	Open shoreline
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 342 - (4.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located in the Wolftever Creek embayment and adjacent to former TVA property (XTCR-49) transferred to the state of Tennessee for public recreation. The parcel is wooded and currently undeveloped. This area is accessible via SR-58. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-342**. Parcel Information**

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	14
Stream Mile and Bank	Wolftever Creek Mile 4.5R

Parcel 343 - (1.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located on the upper end of the Wolftever Creek embayment and adjacent to former TVA property (XTCR-50) transferred to the state of Tennessee for public recreation. A boat-launching ramp has been developed on the parcel. This area is accessible from Snow Hill Road. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-343. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	11
Stream Mile and Bank	Wolftever Creek Mile 6.5R

Parcel 344 - (1.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This small parcel contains a portion of the ROW for Snowhill Road. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-344. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D–Stage Map Numbers	11 and 14
Stream Mile and Bank	Long Savannah Creek Mile 1.3B Wolftever Creek Mile 3.7R TRM 478L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to the state of Tennessee for a roadway • Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 345 - (91.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three non-contiguous tracts of land located along the right and left descending bank of Savannah Creek. This parcel lies entirely below the 685.44-foot msl contour. Savannah Bay, Hero Bay, and Georgetown Bay subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwoods with maintained lawns. The heavily developed portion of this parcel has a low to medium probability for the presence of cultural resources. The less developed and undeveloped portion have a

medium to high probability for the presence of cultural resources. This parcel has not been surveyed for cultural resources. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-345. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	11, 14, and 15
Stream Mile and Bank	Savannah Creek Mile 2RL
Land Use/Land Cover	Mixed pine and hardwood with maintained lawns
Fronts Former TVA Tract(s)	XCR–30, XCR–31, XCR–32, XCR–33, XCR–34, XCR–35, XCR–36, XCR–37, XCR–38, XCR–39, and XCR–405
Structure Profile	Varies
Current Agreements/Commitments	• Approved water use facilities • Revocable license to Tennessee Wildlife Resources Agency

Parcel 346 - (1.5 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This series of small islands are located in the north end of Savannah Bay. All are high-quality scrub/shrub wetlands with some scattered trees. They provide excellent wildlife habitat. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-346. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	15
Stream Mile and Bank	TRM Opposite 477.7L
Land Use/Land Cover	scrub/shrub wetland
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	License to Tennessee Wildlife Resources Agency for wildlife management
Potential Projects	Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 347 - (0.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This small parcel contains a portion of the ROW for Roy Lane. This parcel has a low probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-347. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D–Stage Map Numbers	11
Stream Mile and Bank	Long Savannah Creek Mile 1.5L Wolftever Creek Mile 3.7R TRM 478L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to the state of Tennessee for a roadway • Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 348 - (5.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This narrow parcel serves as a buffer between Snow Hill Road and the reservoir. In 2012, this parcel was heavily impacted by a tornado. It is a mixture of young regeneration and older trees, most consisting of mixed hardwood. This site has provided the public with good bank fishing opportunities. This parcel has a low probability for the presence of undisturbed cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-348. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	11
Stream Mile and Bank	TRM 477.7L
Land Use/Land Cover	Mixed hardwood
Known Dispersed Recreation Opportunities	Wildlife observation and Bank fishing
Current Agreements/Commitments	License to Tennessee Wildlife Resources Agency for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 349 - (1.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of Savannah Creek. This parcel lies entirely below TVA straight line boundary. The current land cover is primarily mixed pine and hardwoods with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-349. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	14
Stream Mile and Bank	Savannah Creek Mile 1.5L
Land Use/Land Cover	Mixed pine and hardwood with maintained lawns
Fronts Former TVA Tract(s)	XCR–701RE, XCR–702RE, and XCR–703RE
Structure Profile	None identified
Current Agreements/Commitments	• Approved water use facilities • Permanent recreation easement

Parcel 350 - (31.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of four non-contiguous tracts of land located along the left descending bank of Savannah Creek and both banks of Wolftever Creek. This parcel lies entirely below the 685.44-foot msl contour. Savannah Peninsula, Royal Harbor, Hampton Creek, Water Crest, Morgan Estates, Clara Chase Estates, and Savannah Hills subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. The northern portion of this parcel has a low to medium probability for the presence of cultural resources. The southern portion has a medium probability for the presence of cultural resources. This parcel has not been adequately surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-350. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE and 112–SE
TVA D-Stage Map Numbers	7, 10, 11, and 14
Stream Mile and Bank	Savannah Creek Mile 0.0-0.5L and Wolftever Creek Mile 5-8.0RL
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–18, XCR–19, XCR–20, XCR–22, XCR–23, XCR–24, XCR–25, XCR–26, XCR–27, XCR–28,XCR–29, XCR–401, and XCR–402
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 351 - (6.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel adjoins former TVA property (XTCR-3 and XTCR-4) transferred to the state of Tennessee for public recreation. The parcel is located off Short Tail Springs Road and is currently undeveloped. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-351. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	11
Stream Mile and Bank	Wolftever Creek Mile 5.0L

Parcel 352 - (0.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for Short Tail Springs Road. While a portion of the parcel is located adjacent to former TVA property (XTCR-3 and XTCR-4) which was transferred to the state of Tennessee for public recreation, the intent of this parcel is support the road ROWs. In locations where the road ROWs and adjacent land use are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered. This parcel has a low probability for the presence of cultural resources, but it has not been adequately surveyed.

Table 4-352. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D–Stage Map Numbers	11
Stream Mile and Bank	TRM 478L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	Harrison Bay State Park
Current Agreements/Commitments	• Permanent easement to the state of Tennessee for a roadway • Revocable license to the state of Tennessee for vegetation management
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 353 - (66.9 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel offers unique habitat to both upland and wetland species. Portions of the parcel are located on upland slopes, and the bulk of the parcel consists of bottomland hardwoods. The parcel is bisected by a meandering Wolftever Creek. Loblolly pines were heavily thinned for forest management in 1990. Beaver activity became a component in the late 1990's; while the

activity resulted in the loss of most of the pine, the flooding has added to the uniqueness of this parcel. The flooding from beaver activity luckily has not impacted adjacent private property, and provides for excellent waterfowl cover, especially wood duck. The parcel does receive regular hunting. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-353. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–Ne and 112–SE
TVA D-Stage Map Numbers	7 and 10
Stream Mile and Bank	TRM Opposite 477.5L
Land Use/Land Cover	bottom-land hardwood/pine
Known Dispersed Recreation Opportunities	Hunting, fishing, and informal hiking
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 354 - (0.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel represents an area where the appropriate rights for private water use facilities do not exist. This parcel has a low probability for the presence of undisturbed cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-354. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	11
Stream Mile and Bank	TRM Opposite 477.7L
Land Use/Land Cover	Open shoreline, upland hardwoods, and cedars
Known Dispersed Recreation Opportunities	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 355 - (197.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is a large tract of land consisting of upland hardwoods, and is situated along Wolftever Creek. It is bounded to the south by residential, and has suffered a small amount of encroachments along that boundary. The southwest corner borders Harrison Bay State Park property. This site is highly visible from all sides by residential development. There also has been some unauthorized trail establishment. This tract once supported large oak, hickory, poplar and loblolly pine stands until 2012, when tornados leveled most of the site. Salvage operations were conducted that fall, resulting in some standing trees, with many hardwood saplings being released. There remain some pockets of large hardwoods in addition to many acres of young regeneration, which will add to the habitat diversity. In addition, the roads and skid trails provide for good foot access for the public. This parcel does receive some hunting use and walking by the public. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-355. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D-Stage Map Numbers	10, 11,and 14
Stream Mile and Bank	TRM 478.0L
Land Use/Land Cover	Upland hardwood
Known Dispersed Recreation Opportunities	Hunting and informal hiking
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 356 - (31.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Wolftever Creek and is encumbered by TL ROWs and a pumping station. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-356. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE
TVA D–Stage Map Numbers	10 and 14
Stream Mile and Bank	Wolftever Creek Mile 3.5L TRM 478L
Land Use/Land Cover	Transmission line right-of-way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easement to Eastside Utility District for a pump station • Permanent easement to the state of Tennessee for recreation
Potential Projects	None identified
Potential Partners	Eastside Utility District State of Tennessee

Parcel 357 - (3.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

Parcel consists of numerous small islands south of Patten Island and support mixed hardwoods and pine. These are low elevation islands that were the former town of Harrison, with old roadbeds and home sites visible during drawdown. Today, the parcel provides a visual buffer between SR-58 and residential development to the west. The parcel also provides shallow water habitat and nesting habitat for waterfowl and shorebirds. This parcel has a high probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-357. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NE and 112–NW

Location Component and Public Involvement Opportunities	Parcel Specific Information
TVA D-Stage Map Numbers	9 and 10
Stream Mile and Bank	TRMs 477-478L
Land Use/Land Cover	Mixed hardwoods and pines
Known Dispersed Recreation Opportunities	Primitive camping and fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	None Identified

Parcel 358 - (6.0 acres)

Zone 6, Public Recreation

This shoreline parcel is adjacent to former TVA property (XCR-16) sold for commercial recreation. The parcel is managed as a part of Island Cove Marina. Amenities include a marina with boat slips and fuel services. This facility is located off SR-58.

Most of this parcel has a low probability for the presence of cultural resources due to disturbance from development. The small island and southern most portion of the parcel have a medium probability for the presence of cultural resources. The island has not been surveyed for cultural resources. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-358. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	10
Stream Mile and Bank	TRM 477.5L

Parcel 359 - (19.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is bordered by SR-58 and was at one time a TVA public recreation area. It was closed due to abuse, but the area continues to receive informal recreation use. However, recent improvements to SR-58 limit parking or access to the site. This parcel has a medium probability for the presence of cultural resources, but has not been surveyed. No existing shoreline

improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-359. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–SW, 112–SE, and 112–NW
TVA D-Stage Map Numbers	6
Stream Mile and Bank	TRM 477.5L
Land Use/Land Cover	Mixed hardwood and pines
Known Dispersed Recreation Opportunities	Informal hiking and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 360 - (26.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two non-contiguous tracts of land located along the right descending bank of Harrison Branch. This parcel lies entirely below the 685.44-foot msl contour. Harrison Point, Waconda Heights, and Waconda Point subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a low to medium probability for the presence of cultural resources, but it has not been adequately surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-360. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	6, 9, and 10
Stream Mile and Bank	Harrison Branch Mile1.2R
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–11, XCR–12, XCR–13, XCR–14, and XCR–15
Structure Profile	690-foot mean sea level

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	Approved water use facilities

Parcel 361 - (1.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel adjoins former TVA property (XTCR-47) transferred to the state of Tennessee for public recreation. A boat-launching ramp has been developed on the site. The area is accessible from Waconda Point Road. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-361. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	9
Stream Mile and Bank	TRM 477.5L

Parcel 362 - (5.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is adjacent to Harrison Point Subdivision and was reconveyed to TVA by the state of Tennessee. This parcel receives heavy informal day-use recreation. The land cover is mixed hardwood. Portions of this parcel have a medium probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-362. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–SW
TVA D-Stage Map Numbers	6
Stream Mile and Bank	TRM 478.0L
Land Use/Land Cover	Mixed hardwood
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 363 - (0.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for Clark Road. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-363. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–SW
TVA D–Stage Map Numbers	6
Stream Mile and Bank	TRM 478L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to the city of Chattanooga for electric utilities • Permanent easement to the state of Tennessee for a roadway
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 364 - (8.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of seven non-contiguous tracts of land located along the left and right descending banks of Harrison Branch. This parcel lies entirely below the 685.44-foot msl contour or a straight line boundary, depending on location. Waconda Bay subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. Most of this parcel has a medium probability for the presence of cultural resources. The heavily developed portion on the left descending has a low probability

for the presence of cultural resources. This parcel has not been adequately surveyed. Water use facilities have been permitted along the shoreline, and future requests for private water use facilities would be considered.

Table 4-364. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–SW
TVA D-Stage Map Numbers	6
Stream Mile and Bank	Harrison Branch 2.2RL
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–5, XCR–6, XCR–7, XCR–8, XCR–9, and XCR–551
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 365 - (10.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is at the head of Waconda Bay slough. The land cover has reverted from open hay field to bottomland hardwood and pine. This property has some encroachments, and receives heavy use by the public. This parcel has a low probability for the presence of cultural resources. A large portion has been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-365. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–SW
TVA D-Stage Map Numbers	6
Stream Mile and Bank	TRM 478.0L
Land Use/Land Cover	Bottomland Hardwood and Pines
Known Dispersed Recreation Opportunities	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• License to the United States Army Engineer District for a well • License to Electric Power Board for an electric utility line • Permanent easement to East Tennessee Natural Gas Company for underground gas line • Permanent easement to United States Army Corps of Engineers for a drainage ditch
Potential Projects	• Continue efforts to eliminate unauthorized use on this tract • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	United States Army Corps of Engineers

Parcel 366 - (9.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

The northern most section of the parcel (TVA monument 6-20 to 9-1) is adjacent to former TVA property (XTCR-45) transferred to the state of Tennessee for public recreation. This part of the parcel, which is wooded and currently undeveloped, is accessible from Glover Road.

The remainder of the parcel fronts former TVA property (XCR-83) sold for a club site. Chattanooga Yacht Club has been developed at this location. Existing facilities include boat slips and parking areas.

The central portion of this parcel has a low probability for the presence of cultural resources. The northern and southern portion of this parcel has a medium probability for the presence of cultural resources and has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-366. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	6
Stream Mile and Bank	TRM 477.5L

Parcel 367 - (0.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for Harrison Pike. While a portion of the parcel is located adjacent to former TVA property (XTCR-45) which was transferred to the state of Tennessee for public recreation, the intent of this parcel is support the road ROWs. In locations where the road ROWs and adjacent land use are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed.

Table 4-367. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D–Stage Map Numbers	6
Stream Mile and Bank	Harrison Branch Mile 1.4L TRM 477.4L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 368 - (2.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. Lakeshore Country Club subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for water use facilities would be considered. There are certain deed restrictions for this parcel that are relevant to TVA permitting.

Table 4-368. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	9
Stream Mile and Bank	Tennessee River 477.2L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–44
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 369 - (10.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

The northern section of the parcel (between TVA monuments 9-6 and 81-3) is adjacent to former TVA property (XTCR-44) transferred to the state of Tennessee for public recreation. This part of the parcel is steep, wooded, and undeveloped. The site is accessible off Glover Road.

The remaining southern portion of the parcel is adjacent to former TVA property (XCR-10) sold for a club site. Water use facilities for members of the Provident Club have been developed on this part of the parcel. This parcel has a low to medium probability for the presence of cultural resources. Bald eagles have been recorded within this parcel. A cave is located within this parcel. No threatened or endangered species are known to utilize this cave. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-369. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	9
Stream Mile and Bank	TRM 477.0L

Parcel 370 - (4.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. Harrison Bluff subdivision is located on the back-lying private property. The current land cover is primarily

mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been adequately surveyed. Water use facilities have been permitted along the shoreline, and future requests for water use facilities would be considered.

Table 4-370. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	9
Stream Mile and Bank	Tennessee River 476.0L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–383
Structure Profile	690-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 371 - (1.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is adjacent to former TVA property (XTCR-43) transferred to the state of Tennessee for public recreation. A boat-launching ramp has been developed on the parcel. This area is accessible from Vincent Road. This parcel has a low probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-371. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−State Map Numbers	9
Stream Mile and Bank	TRM 475.5L

Parcel 372 - (77.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of two noncontiguous tracts of land separated by Booker T. Washington State Park. The parcel experiences moderate informal recreation use.

The northern portion of the parcel has less development along the boundary, and receives more informal recreation, primarily bank fishing. TVA signage for users has been installed in these areas. There is one known encroachment on the northeastern corner of this portion. The northern portion of this parcel has a medium probability for the presence of cultural resources.

The southern portion of the parcel has adjacent residential development. There are some encroachments in this area. This portion is not easily accessible by road to the public. The tract has a westerly aspect and is composed of upland hardwoods with some pine scattered throughout. The southern portion has a low probability for the presence of cultural resources. No part of this parcel has had adequate survey.

No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-372. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D-Stage Map Numbers	9
Stream Mile and Bank	TRM 475.0L
Land Use/Land Cover	Upland Hardwood/Pine
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 373 - (5.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains portions of ROWs for Vincent Road and River Run Drive. The road itself has a low probability for the presence of cultural resources. This parcel, however, intersects an area with a medium probability for the presence of cultural resources. This area has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-373. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW
TVA D–Stage Map Numbers	9
Stream Mile and Bank	TRM 475L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to the state of Tennessee for a roadway • Revocable license to Chattanooga Electric Power Board for electric utilities
Potential Projects	None identified
Potential Partners	Chattanooga Electric Power Board and the State of Tennessee

Parcel 374 - (4.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is adjacent to former TVA property (XTCR-2) transferred to the state of Tennessee for public recreation. A boat-launching ramp has been developed at this location. The area is accessible from Vincent Road. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-374. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	9
Stream Mile and Bank	TRM 475.0L

Parcel 375 - (1.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour. Bartlebaugh subdivision is located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Water use

facilities have been permitted along the shoreline, and future requests for water use facilities would be considered.

Table 4-375. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–NW and 112–SW
TVA D-Stage Map Numbers	5
Stream Mile and Bank	Tennessee River 474.5L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–381
Structure Profile	690-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 376 - (43.0 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Three B HPA featuring forested slopes with habitat suitable for federally listed large-flowered skullcap (*Scutellaria montana*). The parcel is located adjacent to and east of Booker T. Washington State Park and experiences moderate informal recreation use. There are several informal trails on this parcel. The parcel is easily accessible by road, and public use would likely increase within this region of rapid urbanization. As such, it will serve as an effective buffer from further park and private development. Because of the occurrence of federally listed species and high probability of cultural resources on this tract, TVA will thoroughly assess potential impacts that might result from implementation of any proposed land uses or natural resources management activities. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-376. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–SW
TVA D-Stage Map Numbers	5
Stream Mile and Bank	TRM 474.1L
Land Use/Land Cover	Upland Hardwood/Pine
Known Dispersed Recreation Opportunities	Informal hiking and wildlife observation
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 377 - (2.5 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains portion of the ROW for Leamon Road. The road itself has a low probability for the presence of cultural resources. It intersects a parcel however, that has a high probability for the presence of cultural resources. Neither have been surveyed for cultural resources. Requests for private water use facilities would not be considered.

Table 4-377. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–SW
TVA D–Stage Map Numbers	5
Stream Mile and Bank	TRM 475L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to the state of Tennessee for a roadway
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 378 - (36.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel adjoins former TVA property (XTCR-42) transferred to the state of Tennessee for public recreation. The parcel is managed as a part of Booker T. Washington State Park. Amenities include a picnic area, trails, a swimming pool, boat-launching ramp, and fishing pier. The park is accessible from Champion Road. Additional information on Booker T. Washington State Park can be found at http://tnstateparks.com/parks/about/booker-t-washington.

The narrow, steep portion of this parcel has a low probability for the presence of cultural resources. Wider more level areas have a medium probability for the presence of cultural resource. This parcel has not been surveyed for the presence of cultural resources. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-378. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	5
Stream Mile and Bank	TRMs 473.0 to 474.3L

Parcel 379 - (2.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This narrow parcel is located entirely below the 690-foot msl contour and adjacent to former TVA property (XCR-450). The adjacent land use historically consisted of an ammunition terminal. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support operational purposes would be considered.

Table 4-379. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112−SW
TVA D-Stage Map Numbers	5
Stream Mile and Bank	TRM 473L
Land Use/Land Cover	Maintained lawn
Current Agreements/Commitments	None identified

Parcel 380 - (1.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains portion of the ROW for Webb Road. While a portion of the parcel is located adjacent to former TVA property (XTCR-42) which was transferred to the state of Tennessee for public recreation and the establishment of Booker T. Washington State Park, the intent of this parcel is support the road ROWs. In locations where the road ROWs and adjacent land use are

complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered.

This parcel has a low probability for the presence of cultural resources, but it has not been surveyed.

Table 4-380. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–SW
TVA D–Stage Map Numbers	5
Stream Mile and Bank	TRM 473L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	Booker T. Washington State Park
Current Agreements/Commitments	• Permanent easement to the state of Tennessee for a roadway • Permanent easement to the state of Tennessee for recreation • Permanent easement to the U.S. Army Corps of Engineers to utilities
Potential Projects	None identified
Potential Partners	State of Tennessee and U.S. Army Corps of Engineers

---

Parcel 381 - (12.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 685.44-foot msl contour or the 690-foot msl contour, depending on location. Bal Harbor, Windward Point, and Kings Point subdivisions are located on the back-lying private property. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. Most of this parcel has a low to medium probability for the presence of cultural resources. The less developed areas have a medium probability for the presence of cultural resources. This parcel has not been adequately surveyed. Water use facilities have been permitted along the shoreline, and future requests for water use facilities would be considered.

Table 4-381. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–SW
TVA D-Stage Map Numbers	2 and 5
Stream Mile and Bank	Tennessee River 472.6L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract(s)	XCR–2, XCR–155, and XCR–449
Structure Profile	Varies

Parcel 381a - (0.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel represents an area where the appropriate rights for private water use facilities do not exist. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-381a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	112–SW
TVA D-Stage Map Numbers	5
Stream Mile and Bank	TRM 473L
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 382 - (36.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is the Chickamauga Marina operated by Erwin Marine Sales, Inc. via a term commercial recreation easement (XCR-713RE). This area has been operated as a commercial marina since 1947 by various owners. Amenities on this parcel include 100 dry boat slips, 224 covered wet boat slips, boat-launching ramp, vehicle and trailer parking area, waste pump-out

station, and fuel service dock. Other structures include a boat sales building with office space, a repair shop, and storage facilities. Additional information on Chickamauga Marina can be found at http://www.erwinmarinesales.com/. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-382. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	2, 2-2, 2-4, HB29
Stream Mile and Bank	TRMs 471.5L

This page intentionally left blank

CHAPTER 5. PLANNING TEAM

Ben Bean
Position: Program Manager, Reservoir Land Use and Permitting
Education: B.A. Biology; M.S. Environmental Policy and Management
Experience: 10 years in Public Land Management and Permitting, 4 years in water Quality, 2 years in environmental compliance monitoring
Involvement: Planning Team and Deed interpretation

Chellye L. Campbell
Position: Specialist, Land Policy
Education: B.S. Biology
Experience: 15 years in Planning and Managing Land
Involvement: Deed interpretation and Land Policy guidance

Jerry Fouse
Position: Recreation Specialist
Education: M.B.A., B.S., Forestry and Wildlife
Experience: 39 years in Natural Resources – Recreation Planning and Economic Development
Involvement: Planning Team and Recreation Management

Marty High
Position: Program Manager, Natural Resource Management
Education: B.S. Forest Management
Experience: 27 years in Natural Resource Management, Land Management, and Permitting
Involvement: Planning Team and Natural Resource Management

Thomas Maher
Position: Senior Archaeologist
Education: Ph.D. Anthropology
Experience: 33 years in the field of Archaeology
Involvement: Planning Team and Cultural Resource Management

Leonard L. McCurdy, Jr.
Position: Senior Specialist, Reservoir Land Use and Permitting
Education: J.D., Law; B.S., Environmental Studies - Chemistry
Experience: 26 years in the field of Law including 19 years in TVA real property rights
Involvement: Deed interpretation and Land Policy guidance

Heather L. Montgomery
Position: Senior Program Manager, Reservoir Land Planning
Education: B.S., Environmental Biology
Experience: 14 years in Planning and Managing Land and Environmental Impacts Evaluation
Involvement: Program Manager

Mark T. Morrissey

Position:	GIS Analyst
Education:	B.S., Geography
Experience:	1 year in Planning and Managing Land; 5 years in Industrial Safety and Compliance Involvement: Document Preparation; Planning Team; and Preparation of Geographic information Systems

Karen Rylant

Position:	Specialist, Section 26a Policy and Process
Education:	Ph.D., Agronomy (Soil Chemistry); M.S., Soil Fertility; B.A., Chemistry, B.A., Geology
Experience:	8 years in Environmental Research; 4 years in Land and Shoreline Management
Involvement:	Deed interpretation and Section 26a guidance

CHAPTER 6. LITERATURE CITED

Benson, A.J., D. Raikow, J. Larson, A. Fusaro, and A.K. Bogdanoff. 2016. Dreissena polymorpha. USGS Nonindigenous Aquatic Species Database, Gainesville, Florida. Retrieved from https://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=5 (accessed October 2016).

Davis, George, Leslie Perry, and Joseph Kirkley. 1983. The Official Military Atlas of the Civil War. (Original 1891). The Fairfax Press, New York.

EDDMapS. 2016. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Retrieved from http://www.eddmaps.org/ (accessed October 2016).

Etnier, D. A. and W. C. Starnes. 1993. The Fishes of Tennessee. Knoxville: University of Tennessee Press.

Higgins, John M. and W. Gary Brock 2009. Overview of Reservoir Release Improvements at 20 TVA Dams. Journal of Energy Engineering, Vol. 125, No. 1, April, 1999.

Homer, C.G., Dewitz, J.A., Yang, L., Jin, S., Danielson, P., Xian, G., Coulston, J., Herold, N.D., Wickham, J.D., and Megown, K., 2015, Completion of the 2011 National Land Cover Database for the conterminous United States-Representing a decade of land cover change information. Photogrammetric Engineering and Remote Sensing, v. 81, no. 5, p. 345-354.

Kennedy, E. Dale and Douglas W. White. 2013. Bewick's Wren (*Thryomanes bewickii*), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from http://bna.birds.cornell.edu/bna/species/315 (accessed June 2016).

Lewis, T.M., and M. Kneberg. 1946. Hiwassee Island: An Archaeological Account of Four Tennessee Indian Peoples. University of Tennessee Press, Knoxville.

McDonald, MJ, WB Wheeler, and SJ Weeks. 1986. The Chickamauga Reservoir Area: The Two Souths. Submitted under contract to the Tennessee Valley Authority.

McDonough, T. A. and G. D. Hickman. 1999. “Reservoir Fish Assemblage Index Development - A Tool for Assessing Ecological Health in Tennessee Valley Authority Impoundment,” in Assessing the Sustainability and Biological Integrity of Water Resources Using Fish Communities, 523-540. Edited by T. Simon. Washington, D.C.: CRC Press.

Moore, Clarence B. 1915. Aboriginal Sites on the Tennessee River. Journal of the Academy of Natural Sciences of Philadelphia, second series 16(3).

NatureServe. 2016. NatureServe Web Service. Arlington, Virginia. U.S.A. Retrieved from http://services.natureserve.org (accessed July 2016).

Smith, M.T. 1988. An Archaeological Survey of Portions of the Chickamauga Reservoir, Tennessee 1987-1988 Field Seasons. Garrow and Associates, Inc., Atlanta. Report submitted to the Tennessee Valley Authority, Norris, Tennessee.

Smith, M.T., and G. Weaver, C. McNutt, Jr. 1990. Final Report: A Survey of Archaeological Resources in Portions of the Chickamauga Reservoir, Tennessee, 1987, 1988, and 1989 Field Seasons. By Garrow and Associates, Inc., Atlanta, Georgia. Prepared for the Tennessee Valley Authority, Knoxville, Tennessee

Sullivan L.P. editor. 1995. Prehistory of the Chickamauga Basin in Tennessee. Edited by Lynne P. Sullivan. Tennessee Anthropological Papers 1. Department of Anthropology, University of Tennessee, Knoxville.

Summershoe, S.G. and C.A. Sloan. 2015. The Birds of Tennessee: A New Annotated Checklist. CreateSpace Independent Publishing Platform.

Tennessee Department of Environment and Conservation. 2014. Rare Species data viewer. Retrieved from https://tn.gov/environment/article/tdec-dataviewers (accessed July 2016).

———. 2016. 2016 Draft 303(d) List. Retrieved from http://www.tennessee.gov/environment/article/wr-wq-water-quality-reports-publications (accessed August 2016).

Tennessee Exotic Pest Plant Council. 2009. Listing and Categorization of Invasive Exotic Plant Pests in Tennessee. Retrieved from http://www.tneppc.org/invasive_plants (accessed July 2016).

Tennessee State Parks. 2016. Retrieved from http://tnstateparks.com/parks/about/booker-t-washington (accessed August 2016).

Tennessee Valley Authority. 1942. The Chickamauga Project. A comprehensive report of the planning, design, construction, and initial operations of the Chickamauga Project. Technical Report Number 6. Knoxville, Tennessee.

———. 1989. Chickamauga Reservoir Land Management Plan. Retrieved from https://www.tva.gov/Environment/Environmental-Stewardship/Land-Management/Updates-to-8-Reservoir-Land-Management-Plans-and-the-Comprehensive-Valleywide-Land-Plan (accessed October 2016).

———. 1999. Shoreline Management Initiative EIS (SMI): An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley Final Environmental Impact Statement. Retrieved from https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy (accessed October 2016).

———. 2005. Tennessee Valley Authority Recreation Strategic Plan: A Framework for Providing Recreation Opportunities On and Along the Tennessee River 2004-2005

———. 2011. Natural Resource Plan: Natural Resource Plan: Alabama, Georgia, Kentucky, Mississippi, North Carolina, Tennessee, and Virginia, Final Environmental Impact Statement. Tennessee Valley Authority. Retrieved from https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan (accessed October 2016).

———. 2016a. Tennessee Valley Authority Natural Heritage Database, Data Received 2016.

———. 2016b. Reservoir Health Ratings. Retrieved from https://www.tva.gov/Environment/Environmental-Stewardship/Water-Quality/Reservoir-Health-Ratings (accessed July 2016).

———. 2016c. Tennessee Valley Authority Reservoir Vital Signs Monitoring Program Fish Collections, Data Received 2016.

Tennessee Wildlife Resources Agency. 2016. Tennessee Watchable Wildlife. Nashville, Tennessee. Retrieved from www.tennesseewatchablewildlife.org/ (accessed July 2016).

U.S. Census Bureau. 2010a. 2010 Census, USCB Population Division. Annual Estimates of the Resident Population: April 2010-July 1, 2015, UT Center for Business and Economic Research, 2003.

———. 2010b. American Fact Finder 2010-2014 American Community Survey, 5-year estimates Retrieved from http://factfinder.census.gov/ (accessed July 2016).

———. 2015. Annual Estimates of the Resident Population: April 1, 2010-July 1, 2015. Retrieved from http://factfinder.census.gov/ (accessed July 2016).

USDA NRCS. 2016a. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Retrieved from http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed July 2016).

———. 2016b. Natural Resources Conservation Service, United States Department of Agriculture. The PLANTS Database. National Plant Data Team, Greensboro, North Carolina 27401-4901 USA. Retrieved from http://plants.usda.gov (accessed July 2016).

U.S. Department of the Interior. 2008. Reclamation: Managing Water in the West; Resource Management Plan, Navajo Reservoir Area, Colorado and New Mexico, Final Environmental Assessment and Finding of No Significant Impact, June 2008.

U.S. Environmental Protection Agency. 2013. Level III Ecoregions of the Continental United States: Corvallis, Oregon, U.S. EPA– National Health and Environmental Effects Research Laboratory, map scale 1:7,500,000. Retrieved from https://pubs.usgs.gov/tm/04/c03/virtual_CD/useco.pdf (accessed July 2016).

U.S. Fish and Wildlife Service. 2016a. IPaC Trust Resources Report. Information, Planning and Conservation System. Retrieved from https://ecos.fws.gov/ipac/ (accessed October 2016).

U.S. Fish and Wildlife Service. 2016b. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Retrieved from http://www.fws.gov/wetlands (accessed July 2016).

U.S. Geological Survey. 2016. Land Cover Trends Project. Retrieved from http://landcovertrends.usgs.gov/main/ecoIndex.html (accessed July 2016).

This page intentionally left blank

GLOSSARY

acre	A unit measure of land area equal to 43,560 square feet
agricultural licensing	Some parcels or portions of parcels designated for other purposes or uses may also be suitable for interim agricultural licensing. These parcels have been identified using the criteria contained in TVA's agriculture instruction. Normal tenure for a TVA agricultural license is five years. Land with extreme erosion potential may not be licensed for agricultural use unless erosion and sediment controls, including the use of best management practices, can be successfully implemented. Further investigation and/or mitigation of adverse impacts to natural or cultural resources may be required prior to approval of license agreements.
cultural resources	Archaeological, historic, and architectural resources
dam reservation	Lands generally maintained in a park–like setting by TVA to protect the integrity of the dam structure, hydroelectric facilities, and navigation locks. The reservation also provides for public visitor access to the TVA dam facilities and recreation opportunities, such as public boat access, bank fishing, camping, picnicking, etc. Hunting is not typically allowed on dam reservations.
deciduous	Vegetation that sheds leaves in autumn and produces new leaves in the spring.
dispersed recreation	Recreation of an informal nature such as hunting, hiking, biking, bird watching, photography, primitive camping, bank fishing, and picnicking, and etc. that occur on TVA land. These activities are not associated with developed facilities although some improvements may occur for access, health and safety, or to protect the environment.
embayment	A bay or arm of the reservoir
emergent wetland	Wetlands dominated by erect, rooted herbaceous plants, such as cattails and bulrushes.
endangered species	A species in danger of extinction throughout all or a significant part of its range. Endangered species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.
Environmental Policy	A TVA Board–approved policy that communicates guiding principles to lead TVA successfully in the reduction of its environmental impact while continuing to provide reliable and competitively priced power to the Valley
floodplain	Any land area susceptible to inundation by water from any source by a flood of selected frequency. For purposes of the National Flood Insurance Program, the floodplain, as a minimum, is that area subject to one percent or greater chance of flooding (100–year flood) in any given year.
forest	Vegetation having tree crowns overlapping, generally forming 60 to100 percent cover.
Land Policy	A TVA Board–approved policy that guides retention, disposal, and planning interests in real property
mitigation	An action that either will result in avoidance or an effect or cause the results of an activity to be minor in significance
natural areas	Ecologically significant sites, lands set aside for particular management

	objectives, and lands that contain sensitive biological, cultural or scenic resources. The TVA natural area program includes small wild areas, habitat protection areas, wildlife observation areas, and ecological study areas.
plan tract	A numbered parcel of TVA fee–owned land that has been assigned, through the reservoir land planning process, an allocation to guide future land use decisions.
prime farmland	Generally regarded as the best land for farming, these areas are flat or gently rolling and are usually susceptible to little or no soil erosion. Prime farmland produces the most food, feed, fiber, forage, and oil seed crops with the least amount of fuel, fertilizer, and labor. It combines favorable soil quality, growing season, and moisture supply and, under careful management, can be farmed continuously and at a high level of productivity without degrading either the environment or the resource base. Prime farmland does not include land already in or committed to urban development, roads, or water storage.
riparian	Related to or located on the banks of a river or stream
scrub–shrub	Woody vegetation less than about 20 feet tall. Species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions
shoreland	The surface of land lying between the minimum pool elevation of a TVA reservoir and the maximum shoreline contour or TVA back–lying property (whichever is further)
shoreline	The line where the water of a TVA reservoir meets the shore when the water level is at the normal summer pool elevation.
shoreline access rights	TVA land encumbered with deeded or implied rights held by adjacent property owners. The deeded or implied rights allow individuals to construct water use facilities upon receipt of TVA's written approval of plans.
threatened species	A species threatened with extinction throughout all or a significant portion of its range or territory. Threatened species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.
wetlands	As defined in TVA Environmental Review Procedures, "Wetlands are those areas inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances do or would support a prevalence of vegetation or aquatic life that requires saturated or seasonably saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, mud flats, and natural ponds.
wildlife management area	Land and/or water areas designated by state wildlife agencies, such as the Tennessee Wildlife Resources Agency, for the protection and management of wildlife. These areas typically have specific hunting and trapping regulations as well as rules regarding appropriate uses of these areas by the public.

INDEX

Advisory Council on Historic Preservation 44
Alabama 7, 27, 30, 31, 45, 271, 334
aquatic ecology ..... i, 21, 24
archaeological resource 44, 58
area of potential effect 44, 45
back-lying land 66, 69, 134, 249
best management practice 337
Chickamauga .... i, ii, iii, 1, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 24, 25, 26, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 57, 62, 63, 64, 65, 66, 67, 68, 71, 73, 74, 124, 130, 159, 160, 163, 164, 165, 166, 168, 170, 172, 173, 175, 177, 179, 181, 182, 183, 186, 187, 188, 189, 191, 196, 197, 199, 200, 202, 204, 207, 208, 209, 211, 213, 214, 233, 241, 253, 256, 260, 262, 264, 328, 333, 334, 347
Committed land 61
Comprehensive Valleywide Land Plan ..... iii, v, 6, 57, 66, 67, 68
cultural resource 43, 44, 63, 67, 71, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 337
deeded access 69
developed recreation . 6, 11, 12, 13, 30, 34, 43, 48, 49, 60, 63, 66, 67, 68, 74, 75, 79, 83, 86, 87, 88, 89, 92, 94, 101, 104, 106, 108, 110, 113, 114, 119, 122, 124, 131, 134, 139, 141, 145, 150, 151, 155, 157, 161, 162, 165, 176, 183, 185, 193, 195, 199, 203, 205, 206, 210, 215, 216, 221, 222, 224, 228, 232, 233, 237, 238, 244, 249, 253, 256, 259, 261, 263, 266, 271, 273, 276, 277, 283, 289, 292, 294, 301, 303, 308, 313, 315, 318, 320, 321, 323, 325, 326, 328, 329
dissolved oxygen 21, 23, 38, 39
ecologically significant site 47, 55, 337
endangered species ..... i, 24, 30, 54, 63, 198, 272, 320, 337, 338
environmental impact statement ..... v, 1, 334
Executive Order 19, 51
fishii, v, 14, 21, 22, 24, 26, 35, 36, 39, 58, 188, 197, 198, 199, 200, 208, 210, 244, 264, 333, 335
flood 1, 9, 10, 41, 42, 45, 57, 337
floodplain 42, 337
flowage easement 9, 10, 57
industrial 6, 10, 11, 24, 39, 40, 43, 46, 48, 49, 57, 59, 60, 62, 63, 66, 67, 68, 69, 90, 103, 109, 110, 185, 241, 242, 243, 248, 249, 250, 251, 253, 332
Kentucky 7, 15, 17, 53, 334

land use .. i, ii, iii, 3, 6, 9, 10, 40, 44, 46, 48, 49, 57, 58, 61, 62, 63, 64, 66, 67, 68, 69, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 87, 88, 89, 90, 91, 92, 93, 95, 96, 97, 98, 99, 100, 101, 102, 103, 105, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 283, 284, 285, 286, 288, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 331, 338, 347
marginal strip 68, 134
maximum shoreline contour 338
mitigation 337
mussel 24, 27, 37, 186, 191, 197, 198, 199, 200
National Environmental Policy Act (NEPA) ..... v, 24, 47, 51, 57, 69
National Historic Preservation Act ..... v, 44
National Park Service ..... v, 17, 47
National Register of Historic Places ..... v, 43, 46, 47, 53, 54, 58, 71, 147, 260, 271
natural area 47, 55, 58, 59, 60, 63, 77, 101, 129, 337, 338
Nickajack 9, 45
plant communities 19, 31
prime farmland .....i, ii, 9, 10, 11, 159, 160, 163, 166, 179, 211, 338
recreation ...i, ii, 5, 6, 10, 11, 12, 13, 14, 15, 30, 34, 42, 43, 48, 49, 54, 55, 58, 59, 60, 61, 63, 66, 67, 68, 69, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 83, 84, 85, 86, 87, 88, 89, 90, 92, 93, 94, 95, 96, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 124, 125, 126, 127, 128, 129, 131, 132, 133, 134, 135, 136, 137, 139, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 153, 154, 155, 157, 158, 159, 160, 161, 162, 163, 165, 166, 167, 169, 170, 171, 172, 174, 175, 176, 177, 178, 180, 181, 182, 183, 184, 185, 187, 189, 190, 191, 192, 193, 195, 196, 197, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 210, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 230, 231, 232, 233, 235, 237, 238, 239, 240, 242, 244, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 266, 268, 270, 271, 272, 273, 274, 276, 277, 279, 281, 283, 284, 286, 288, 289, 290, 291, 292, 293, 294, 295, 296, 298, 299, 300, 301, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 331, 334, 337
Reservoir Land Management Plan ....1, iii, v, 1, 5, 6, 9, 10, 11, 12, 13, 15, 18, 24, 30, 31, 33, 34, 38, 40, 41, 42, 43, 44, 46, 49, 57, 61, 63, 64, 65, 66, 67, 68, 69, 71, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 138, 139, 140, 141, 142, 143, 144, 145, 146, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231,

232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 334
residential development 10, 73, 76, 80, 93, 100, 102, 295, 311, 312, 322
residential water use facilities 61
scoping 1
Section 106 of the National Historic Preservation Act 44
Section 26a of the TVA Act 10, 40, 57
sensitive resource 6, 11, 13, 30, 33, 34, 49, 54, 55, 58, 59, 61, 62, 63, 65, 67, 68, 69, 73, 76, 82, 100, 115, 118, 123, 128, 146, 149, 159, 163, 179, 180, 188, 191, 198, 200, 206, 213, 217, 231, 244, 250, 251, 255, 260, 271, 275, 278, 282, 285, 289, 293, 295, 305, 309, 312, 324
shoreline access .. 6, 11, 49, 55, 57, 61, 63, 66, 67, 68, 69, 75, 78, 79, 82, 85, 87, 89, 91, 92, 95, 97, 98, 104, 106, 108, 113, 115, 116, 118, 120, 123, 125, 126, 130, 132, 138, 140, 142, 145, 148, 152, 153, 156, 157, 161, 164, 167, 168, 171, 172, 174, 176, 178, 181, 192,194, 198, 201, 203, 205, 207, 209, 210, 212, 213, 215, 224, 226, 229, 230, 232, 234, 235, 236, 237, 240, 245, 246, 255, 258, 259, 261, 265, 267, 273, 274, 275, 278, 279, 283, 285, 286, 290, 294, 296, 297, 302, 304, 307, 308, 314, 316, 319, 320, 323, 327, 338
Shoreline Management Initiative ..... v, 3, 10, 41, 57, 334
Shoreline Management Policy ..... i, v, 3, 10, 61, 69, 96
socioeconomics ..... i, 50
species...i, ii, 15, 17, 18, 19, 20, 22, 24, 25, 30, 31, 32, 33, 34, 35, 36, 37, 38, 41, 54, 58, 59, 63, 65, 67, 73, 97, 103, 135, 147, 166, 173, 186, 191, 197, 198, 199, 200, 204, 207, 211, 214, 218, 238, 244, 271, 272, 279, 287, 309, 320, 324, 333, 334, 337, 338
State Historic Preservation Officer ..... v, 44
tailwater 38
Tennessee1, i, ii, v, 1, 2, 7, 8, 9, 10, 12, 13, 14, 19, 20, 26, 27, 29, 30, 32, 33, 35, 36, 37, 38, 39, 40, 42, 45, 46, 47, 48, 50, 51, 52, 53, 54, 65, 66, 68, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96,97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148,149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 333, 334, 335, 338
Tennessee Valley Authority 1, i, ii, iii, v, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 16, 17, 18, 19, 21, 22, 23, 24, 30, 32, 33, 34, 35, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 51, 52, 54, 55, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159,

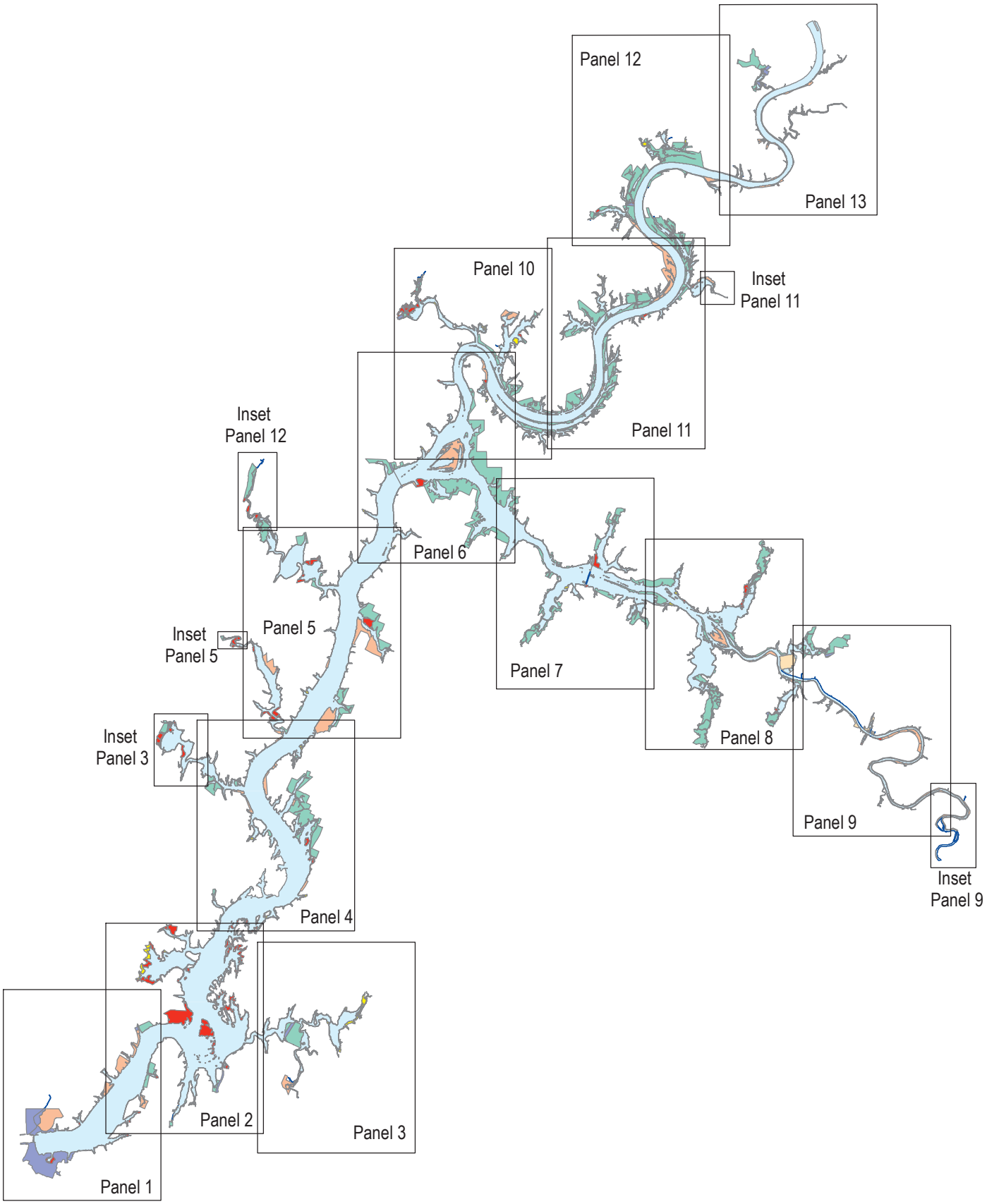
160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 331, 333, 334, 335, 337, 338, 347
terrestrial ecology ..... i, 15, 18
threatened ..... i, 24, 29, 30, 35, 54, 58, 63, 218, 271, 320, 338
threatened species 24, 218, 271, 338
TVA Land Policy 69
U.S. Army Corps of Engineers 72, 327
U.S. Environmental Protection Agency 15, 335
U.S. Fish and Wildlife Service 15, 17, 18, 58, 335
U.S. Forest Service ..... v, 17, 47
uncommitted land 62
visual resource ..... i, 5, 47
wetland. i, ii, v, 16, 18, 31, 32, 33, 34, 40, 41, 42, 48, 58, 63, 65, 96, 97, 135, 137, 147, 149, 158, 159, 160, 161, 163, 164, 165, 166, 167, 168, 170, 172, 177, 182, 183, 186, 187, 189, 190, 193, 196, 206, 207, 208, 210, 211, 212, 213, 214, 216, 217, 221, 225, 227, 229, 230, 231, 233, 234, 235, 238, 244, 253, 254, 256, 257, 262, 264, 265, 267, 268, 269, 275, 276, 277, 284, 305, 309, 335, 337, 338
Wheeler 7, 333
wildlife ... ii, v, 13, 15, 17, 18, 19, 20, 25, 32, 33, 39, 40, 42, 47, 48, 52, 54, 55, 58, 59, 62, 65, 73, 77, 81, 84, 88, 97, 98, 99, 103, 111, 116, 124, 127, 128, 129, 133, 135, 138, 146, 147, 148, 149, 159, 160, 161, 163, 166, 167, 168, 170, 173, 174, 177, 178, 179, 180, 182, 183, 184, 186, 187, 189, 190, 196, 197, 201, 204, 207, 208, 209, 211, 212, 213, 214, 215, 217, 218, 219, 220, 221, 222, 225, 228, 229, 231, 233, 234, 235, 238, 244, 251, 252, 253, 254, 257, 260, 261, 262, 263, 264, 265, 266, 268, 269, 270, 272, 275, 277, 279, 280, 282, 286, 290, 304, 305, 306, 307, 314, 324, 331, 335, 338
Wilson 7, 210

This page intentionally left blank

Appendix A – Draft Land Management Plan Maps – Panels 1 through 12

This page intentionally left blank

Chickamauga Reservoir



Click Panel to View PDF Map

This page left blank intentionally

Appendix B – Comparison of Parcel Allocations by Alternative

This page intentionally left blank

APPENDIX B

Comparison of Parcel Allocations by Alternative

CHICKAMAUGA RESERVOIR

Of the 16,061.4 acres on Chickamauga Reservoir, there are no proposed allocation changes to 10,353.7 acres (64.5 percent); all proposed allocation changes involve 5,707.7 acres (35.5 percent). Of the 5,707.7 acres, TVA would allocate 2,131.1 acres (37.3 percent) to reflect existing land use agreements or commitments. The remaining 3,576.6 acres (62.7 percent) involve proposed parcel allocations that are not based on existing land use agreements or commitments.

[1]Some parcels are separated into smaller portions to show comprehensive consideration of some parcels. Portions of parcels are in bold text with a footnote.

See Tables below:

Table 1 = No Proposed Allocation Changes;
Table 2 = Changes Based on Existing Agreements or Commitments;
Table 3 = Changes NOT based on Existing Agreements or Commitments

Table 1. No Proposed Allocation Changes			
Number of Parcels Per Zone Allocation			
Zone 2	23	Zone 5	5
Zone 3	27	Zone 6	43
Zone 4	73	Zone 7	96

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
1	2	2	783.7
3[1]	6	6	16.8
5	7	7	2.6
6	6	6	3.2
8	3	3	178.0
9	2	2	5.6
10	7	7	8.3
11	6	6	6.0
12	7	7	1.3
13	2	2	5.9
14	4	4	55.4

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
15	4	4	2.5
19	4	4	2.0
20	2	2	1.3
21	7	7	6.5
23[1]	6	6	93.5
24	7	7	59.0
26	4	4	1.3
27	7	7	15.6
31	7	7	13.7
32[1]	6	6	1.4
33	7	7	12.7
34	4	4	6.2
35[1]	4	4	197.7
35	6	6	5.6
37[1]	7	7	0.5
39[1]	7	7	6.6
40	4	4	3.0
41	7	7	39.1
42	4	4	10.3
43	3	3	35.2
44	6	6	4.2
46	4	4	90.6
49[1]	7	7	9.1
50	6	6	0.8
52	7	7	1.1
54	6	6	20.4
55	7	7	3.1
58[1]	6	6	46.6
59[1]	2	2	8.2
60	4	4	47.3
61[1]	4	4	0.3
63	7	7	6.6
64[1]	6	6	0.4
67	4	4	31.6
68	7	7	16.4
69	3	3	19.3
70	7	7	7.7
71[1]	6	6	49.4
73	7	7	15.9
76	7	7	11.2

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
77[1]	3	3	75.3
79	7	7	1.0
80[1]	4	4	13.4
81	7	7	28.7
82	4	4	4.2
83	3	3	9.6
84	4	4	1.9
85	7	7	14.2
86[1]	6	6	4.9
88	7	7	0.8
89	4	4	47.5
91[1]	6	6	1.0
92	4	4	121.5
95	4	4	109.0
96	7	7	5.9
97	4	4	55.0
98[1]	6	6	31.9
99[1]	7	7	25.2
101	4	4	5.8
102	7	7	26.5
103[1]	4	4	72.9
104	2	2	11.4
106	7	7	18.7
107	3	3	3.4
108[1]	3	3	273.9
109	4	4	7.2
110	7	7	21.8
116	7	7	3.0
117[1]	4	4	7.0
118	7	7	7.3
119[1]	4	4	23.3
120[1]	2	2	39.7
121	6	6	92.5
122	7	7	9.5
124	6	6	2.0
125[1]	7	7	14.6
125a[1]	4	4	0.3
127	3	3	3.7
128[1]	4	4	0.1
129	7	7	4.5

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
130[1]	6	6	3.7
131[1]	2	2	1.9
133[1]	7	7	67.6
134	4	4	11.3
136	4	4	6.3
138	7	7	7.8
139[1]	7	7	7.8
141	7	7	6.5
142	4	4	27.2
144	7	7	5.8
145	4	4	61.6
146[1]	7	7	33.5
147	4	4	150.6
148	7	7	21.6
150	4	4	0.2
152	7	7	23.7
155	7	7	10.1
156	3	3	262.6
157	2	2	2.9
158	3	3	34.4
159	7	7	35.4
160	4	4	66.2
161	6	6	6.2
162	4	4	62.9
163[1]	2	2	19.4
165[1]	4	4	277.2
166	4	4	469.3
167[1]	7	7	34.2
168[1]	3	3	92.1
169	4	4	163.7
172	3	3	63.1
173	7	7	20.3
176[1]	7	7	0.5
177	7	7	37.8
178[1]	6	6	1.1
181	4	4	0.2
183	7	7	2.1
184[1]	3	3	17.8
185	6	6	3.8
187	3	3	47.3

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
188[1]	7	7	12.8
190[1]	4	4	29.7
191	7	7	3.6
193[1]	4	4	49.2
194	7	7	21.8
195[1]	6	6	0.8
198	7	7	13.3
199[1]	4	4	0.1
200	7	7	10.2
201[1]	4	4	4.1
202	6	6	14.6
203	7	7	15.6
204[1]	4	4	0.5
205[1]	7	7	30.7
206[1]	3	3	17.4
207	7	7	17.9
208[1]	4	4	158.7
209	7	7	67.9
210	6	6	10.9
212[1]	4	4	0.3
213	3	3	29.9
219[1]	6	6	30.9
220	2	2	5.5
222	7	7	2.3
224	4	4	110.1
225[1]	2	2	4.6
226	7	7	25.3
227	4	4	1.8
228	4	4	155.7
229[1]	6	6	1.0
230	7	7	7.4
231[1]	4	4	0.4
232[1]	7	7	4.6
235	7	7	10.9
236	4	4	75.6
239	4	4	192.4
240	7	7	7.0
241	7	7	4.6
242	4	4	25.4
243	7	7	4.3

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
245	4	4	268.2
246[1]	2	2	12.6
249	5	5	2.2
250	5	5	129.9
251[1]	2	2	0.3
252[1]	5	5	12.9
253	6	6	1.7
254[1]	3	3	277.1
255	7	7	5.2
256	7	7	12.0
257	7	7	0.9
260	2	2	0.1
261	5	5	0.3
262[1]	6	6	14.2
263[1]	5	5	30.2
265	3	3	7.8
267[1]	2	2	3.6
269	4	4	65.2
270	2	2	6.7
271	3	3	41.0
272	7	7	17.8
274	4	4	425.8
275[1]	2	2	6.3
276	7	7	7.1
278	7	7	15.4
280	4	4	36.8
282[1]	7	7	10.9
283	4	4	104.5
285[1]	2	2	4.6
286	4	4	101.6
287	7	7	16.0
288	4	4	48.1
289	6	6	3.3
290	7	7	14.8
291	4	4	5.3
295	6	6	36.2
296	3	3	13.8
297	2	2	0.4
298	7	7	12.7
299	6	6	1.4

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
301	7	7	2.9
302	7	7	25.3
305	4	4	259.3
306[1]	6	6	44.7
307	7	7	13.3
308	3	3	202.1
309	7	7	14.6
310	4	4	150.4
312[1]	3	3	197.2
313	6	6	3.9
314	7	7	16.3
315[1]	4	4	2.3
316	7	7	4.8
317	3	3	49.2
318	7	7	16.1
319	4	4	435.0
321[1]	6	6	0.9
323	7	7	11.1
324	2	2	22.0
325[1]	4	4	3.7
326[1]	6	6	17.7
327	3	3	0.9
330	7	7	5.2
331	3	3	15.3
332	7	7	14.5
334	7	7	9.6
336	4	4	8.8
337[1]	2	2	32.1
338	4	4	4.3
339	6	6	2.7
340[1]	6	6	50.7
341	7	7	25.5
343	6	6	0.5
345	7	7	91.1
346[1]	3	3	0.7
348	4	4	5.0
349	7	7	1.8
350	7	7	31.5
358[1]	6	6	5.3
359	4	4	19.6

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
360	7	7	26.2
361	6	6	1.1
362	4	4	5.6
364	7	7	8.6
365	4	4	10.2
368	7	7	2.4
369[1]	6	6	8.1
370	7	7	4.5
372	4	4	77.3
374	6	6	4.4
375	7	7	1.2
376	3	3	43.0
378	6	6	36.1
379	2	2	2.0
381	7	7	12.7
381a	4	4	0.1
Total = 267 Parcels or Portions of a Parcel		**Total = 10,353.7 Acres**	

[1]Denotes a portion of the parcel

Table 2. Changes Based on Existing Agreements or Commitments			
	No Action[1] Parcels	Proposed Allocation Parcels	
Zone 2	1	72	*13.2 Percent of All Lands*
Zone 3	24	1	
Zone 4	82	28	
Zone 5	1	10	185 parcels 12,131.1 acres
Zone 6	19	56	
Zone 7	58	18	

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
3[1]	7	6	1.7
4	4	2	3.4
16	4	7	0.3
18	4	6	213.9
22	4	6	2.4
23[1]	4	6	25.8
23[1]	7	6	0.6
25	7	6	25.2
28	4	6	47.0
29	4	2	2.9
30	4	5	0.1
31a	7	4	0.2
32[1]	7	6	0.3
35[1]	4	6	0.8
36[1]	4	2	1.2
36[1]	6	2	0.2
37[1]	3	7	1.1
39[1]	6	7	0.2
41a	7	4	0.4
45[1]	4	2	6.7
45[1]	6	2	1.4
47	4	5	2.3
48	4	6	2.4
49[1]	6	7	1.3
49a	7	4	0.5
51	4	6	3.6
56	7	2	2.9
57	7	5	0.9
58[1]	4	6	4.6

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
59[1]	4	2	4.0
59[1]	6	2	3.9
61[1]	7	4	2.4
62	4	6	11.0
64[1]	4	6	5.1
66	5	7	2.2
68a	7	4	0.2
71[1]	4	6	2.7
71[1]	7	6	2.5
72[1]	4	2	0.2
72[1]	6	2	3.9
73a	7	4	0.1
74	4	6	49.7
75	3	4	12.2
78[1]	4	6	13.1
78[1]	7	6	1.8
80[1]	7	4	1.5
81a	7	4	0.03
85a	7	4	0.1
86[1]	7	6	0.4
87	6	2	0.2
90[1]	4	2	1.3
90[1]	6	2	3.3
91[1]	4	6	99.2
93	4	2	2.3
94	4	2	13.7
98[1]	4	6	15.4
99[1]	4	7	0.1
100	4	6	0.8
102a	7	4	0.1
105	4	6	1.1
112	4	6	8.5
115	7	2	0.3
117[1]	7	4	6.3
119[1]	7	4	4.6
120[1]	4	2	2.0
120[1]	6	2	10.0
120[1]	7	2	0.1
125[1]	6	7	4.2
125a[1]	7	4	3.2

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
126	3	4	59.5
128[1]	3	4	53.6
130[1]	4	6	5.6
131[1]	4	2	0.5
131[1]	6	2	0.8
131[1]	7	2	0.6
133[1]	4	7	0.03
139[1]	3	7	1.1
143	7	2	1.1
146[1]	4	7	0.4
149[1]	4	2	0.4
149[1]	7	2	0.04
151	4	6	6.4
153[1]	7	4	0.1
154	3	2	4.3
163[1]	3	2	0.2
163[1]	4	2	0.2
164	7	5	8.8
165[1]	7	4	0.7
167[1]	4	7	4.6
170	4	2	0.9
171	4	2	52.2
174	7	2	1.3
175	7	6	3.0
176[1]	3	7	0.02
178[1]	7	6	0.3
179[1]	3	2	0.8
179[1]	6	2	0.1
180	7	4	4.9
186	6	2	0.2
188[1]	3	7	0.01
189	7	4	1.0
195[1]	4	6	8.1
196[1]	4	2	1.6
196[1]	7	2	0.1
201[1]	7	4	0.8
205[1]	3	7	0.7
211	6	2	0.9
212[1]	7	4	27.7
216	3	2	2.2

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
218	3	2	5.3
219[1]	3	6	3.1
219[1]	7	6	0.5
223	7	6	0.5
225[1]	4	2	3.0
229[1]	4	6	2.9
231[1]	7	4	1.2
232[1]	4	7	3.6
234	4	6	10.1
237	4	6	48.9
238	4	7	3.0
244	7	6	6.7
246[1]	4	2	7.4
246[1]	7	2	0.5
247	4	7	4.6
248	4	2	1.3
251[1]	3	2	1.5
251[1]	4	2	0.2
251[1]	6	2	0.4
252[1]	3	5	26.5
252[1]	4	5	8.2
252[1]	6	5	2.1
252[1]	7	5	1.0
258	3	2	12.0
259	3	2	0.2
263[1]	4	5	1.1
263[1]	7	5	41.6
267[1]	7	2	0.03
268	4	6	15.3
273	7	6	3.4
275[1]	4	2	0.1
277	4	6	6.2
281	4	6	0.9
282[1]	4	7	7.0
284	4	6	3.8
285[1]	7	2	0.03
292	3	4	238.3
294	3	2	4.4
299	4	6	2.6
300	4	2	0.1

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
304	4	6	8.3
306[1]	4	6	2.2
311	4	2	6.4
315[1]	7	4	22.1
320[1]	3	2	8.8
320[1]	4	2	7.8
321[1]	4	6	1.2
325[1]	3	4	151.3
326[1]	3	6	0.6
329	4	6	12.4
333	7	2	0.6
335	4	2	0.9
337[1]	4	2	2.9
337[1]	7	2	0.2
340[1]	4	6	439.6
341a	7	4	0.2
342	4	6	4.0
343	4	6	0.8
344[1]	4	2	1.2
344[1]	6	2	0.1
347	7	2	0.1
352	4	2	0.1
353[1]	7	3	1.2
354	7	4	0.8
356	4	2	30.8
356	6	2	0.8
358[1]	4	6	0.7
363	4	2	0.9
366	7	6	9.7
367	7	2	0.4
369[1]	7	6	2.7
371	4	6	1.2
373	4	2	5.4
377	3	2	2.5
380	6	2	1.2
382	2	6	17.5
Total = 185 Parcels or Portions of a Parcel		**Total = 2,131.1 Acres**	

[1]Denotes a portion of the parcel

Table 3. Changes NOT Based on Existing Agreements or Commitments			
	No Action Parcels	Proposed Allocation Parcels	
Zone 2	5	0	*22.3 Percent of All Lands*
Zone 3	20	24	
Zone 4	24	25	
Zone 5	1	0	56 parcels
Zone 6	3	7	3,576.6 acres
Zone 7	3	0	

Parcel	**No Action Allocation (Alternative A)**	**Proposed Allocation (Alternative B)**	**Acres per Allocation**
2	2	3	226.3
7	3	4	7.4
17	4	3	0.6
38	3	4	9.3
53	3	4	6.3
65	5	3	1.2
77[1]	4	3	0.8
103[1]	3	4	35.3
108[1]	4	3	1.8
111	4	3	4.1
113	7	4	6.0
114	4	6	0.8
119[1]	2	4	6.8
119[1]	6	4	2.3
123[1]	3	4	2.5
123[1]	7	4	1.1
132	4	3	54.8
135	4	6	5.4
137	3	4	206.2
140	3	4	150.7
153[1]	3	4	232.1
163a	2	6	3.2
168[1]	4	3	3.5
168[1]	7	3	22.3
182	3	4	6.4
184[1]	2	3	0.9
190[1]	3	4	21.7
192[1]	2	6	0.2
192[1]	4	6	1.1
193[1]	3	4	380.0

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
197	4	3	30.9
199[1]	3	4	39.0
204	3	4	232.4
206[1]	4	3	0.3
208[1]	3	4	1.0
212[1]	3	4	13.9
214	3	4	810.4
215	3	4	38.4
217	3	4	20.0
221	6	4	29.5
233	4	3	9.1
254[1]	4	3	0.1
254[1]	6	3	9.2
262[1]	4	6	0.9
264	4	3	0.9
266	3	4	12.8
279	4	3	102.2
293	3	4	735.9
303	4	3	3.1
312	4	3	1.6
322	4	3	6.6
328	4	3	1.5
346[1]	4	3	0.8
351	4	6	6.3
353[1]	4	3	65.7
357	4	3	3.3
Total – 56 Parcels or Portions of a Parcel		**Total = 3,576.6 Acres**	

[1]Denotes a portion of the parcel

This page intentionally left blank

TENNESSEE VALLEY AUTHORITY

Multiple Reservoir Land Management Plans

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Volume II

C2NJú [2dzŘ2dzy Reservoir

December 2016

This page left blank intentionally

Document Type: EIS Administrative Record
Index Field: Draft EIS
Project Name: Multiple RLMPs & CVLP EIS
Project Number: 2016-2

FORT LOUDOUN RESERVOIR

Draft Reservoir Land Management Plan

VOLUME III

MULTIPLE RESERVOIR LAND MANAGEMENT PLANS
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Prepared by
Tennessee Valley Authority

December 2016

This page intentionally left blank

TABLE OF CONTENTS

TABLE OF CONTENTS ..... **III-I**
ACRONYMS AND ABBREVIATIONS ..... **III-V**
CHAPTER 1. INTRODUCTION **III-1**
1.1 Tennessee Valley Authority History III-1
1.2 Overview of TVA's Vision and Environmental Policy III-2
1.2.1 TVA's Mission III-2
1.2.2 Environmental Policy III-2
1.2.3 Land Policy III-2
1.2.4 Shoreline Management Policy III-5
1.3 The Natural Resource Plan III-5
1.4 Purpose of Reservoir Land Planning III-6
CHAPTER 2. REGIONAL OVERVIEW **III-7**
2.1 History of Fort Loudoun Dam III-7
2.2 Fort Loudoun Reservoir and Present Shoreline III-8
2.2.1 Land Use and Prime Farmland III-9
2.2.2 Recreation III-11
2.2.3 Terrestrial Ecology III-13
2.2.4 Aquatic Ecology III-19
2.2.5 Threatened and Endangered Species III-22
2.2.6 Water Quality III-33
2.2.7 Wetlands III-35
2.2.8 Floodplains III-36
2.2.9 Air Quality III-37
2.2.10 Cultural and Historic Resources III-38
2.2.11 Natural Areas and Ecologically Significant Sites III-40
2.2.12 Aesthetics and Visual Resources III-41
2.2.13 Noise III-42
2.2.14 Socioeconomics III-43
2.3 The Future Management of Reservoir Lands III-45
CHAPTER 3. LAND PLANNING PROCESS **III-47**
3.1 Process for Planning Land III-47
3.2 Fort Loudoun Reservoir Goals and Objectives III-52
3.3 Parcel Allocations III-53
3.4 Property Administration III-57

CHAPTER 4. PARCEL DESCRIPTIONS III-59
CHAPTER 5. PLANNING TEAM III-135
CHAPTER 6. LITERATURE CITED III-137
GLOSSARY III-141
INDEX III-143

Appendices

Appendix A – Draft Land Management Plan Maps – Panels 1 through 5 ..... III-145
Appendix B – Comparison of Parcel Allocations by Alternative III-149

List of Tables

Table 2-1. Prime Farmland and Farmland of Statewide Importance in Fort Loudoun Reservoir III-10
Table 2-2. Developed Public Recreation Areas on TVA Lands on the Fort Loudoun Reservoir III-12
Table 2-3. Developed Commercial, Private and Semi-Private (camps) Recreation Areas on TVA Lands on the Fort Loudoun Reservoir III-13
Table 2-4. Land Cover on TVA Owned Parcels and within the Vicinity of Fort Loudoun Reservoir 14
Table 2-5. Invasive Non-Native Plant Species that Pose a Severe Threat Known to Occur in Tennessee III-17
Table 2-6. RFAI and Benthic Community Scores for Fort Loudoun Reservoir (2011-2015) III-19
Table 2-7. Fish Species in Fort Loudoun Reservoir III-20
Table 2-8. Federally and State-Listed Species in the Fort Loudoun Reservoir Counties III-23
Table 2-9. Habitat Requirements for Plant Species of Conservation Concern within 5 Miles of Fort Loudoun Reservoir III-27
Table 2-10. Habitat Requirements for Wildlife Species of Conservation Concern within the 3 Miles of Fort Loudoun Reservoir III-28
Table 2-11. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Fort Loudoun Reservoir III-31
Table 2-12. Ecological Health Indicators at Fort Loudoun Reservoir – 2011 ..... III-34
Table 2-13. Direct Reservoir Average Daily Water Supply Withdrawals and Wastewater Discharges – 2016 ..... III-35
Table 2-14. Wetland Types within the Fort Loudoun Reservoir III-36
Table 2-15. Population and Percent Growth – Fort Loudoun Reservoir III-43
Table 2-16. Employment and Income, 2010-2014 – Fort Loudoun Reservoir III-44
Table 2-17. Minority Population and Poverty, 2010-2014 – Fort Loudoun Reservoir III-45
Table 3-1. Land Use Zone Definitions III-47
Table 3-2. Summary of Proposed Land Use Allocations for Fort Loudoun Reservoir Land Management Plan (Alternative B) III-54
Table 3-3. Draft Fort Loudoun Reservoir Land Management Plan (Alternative B) and 2011 Comprehensive Valleywide Land Plan Comparison III-57

List of Figures

Figure 1-1. TVA Managed Reservoir Land III-4
Figure 3-1. Percent of Fort Loudoun Reservoir Acreage Allocated by Zone III-54

This page intentionally left blank

ACRONYMS AND ABBREVIATIONS

§	Section
APE	Area of Potential Effect
CFR	Code of Federal Regulations
CVLP	Comprehensive Valleywide Land Plan
dBA	A-weighted Decibel
EIS	Environmental Impact Statement
EO	Executive Order
msl	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRI	Nationwide Rivers Inventory
NRP	Natural Resource Plan
PCB	Polychlorinated Biphenyl
$PM_{2.5}$	Particulate Matter particles less than 2.5 micrometers in aerodynamic diameter
RFAI	Reservoir Fish Assemblage Index
RLMP	Reservoir Land Management Plan
RVSMP	Reservoir Vital Signs Monitoring Program
SMI	Shoreline Management Initiative
SHPO	State Historic Preservation Office
SMP	Shoreline Management Policy
SR	Tennessee State Route
TMDL	Total Maximum Daily Load
TRM	Tennessee River Mile
TVA	Tennessee Valley Authority
TWRA	Tennessee Wildlife Resources Agency
U.S.	United States
USDA	U.S. Department of Agriculture
USDOI	U.S. Department of the Interior
USGS	U.S. Geologic Survey

This page left blank intentionally

CHAPTER 1. INTRODUCTION

The draft Fort Loudoun Reservoir Land Management Plan (RLMP) is a study of the Tennessee Valley Authority (TVA)-managed public land surrounding Fort Loudoun Reservoir. It is one of eight draft RLMPs considered under Alternative B of this Environmental Impact Statement (EIS). The EIS Volume I contains information on the scoping process, allocation process, alternatives, comparison of the alternatives, and analysis of impacts. In addition, the EIS contains a summary, an index, and appendices.

Volume III of the EIS addresses TVA's draft RLMP for Fort Loudoun Reservoir. This Volume provides background information about TVA land management throughout its history and specifically TVA management of public land surrounding Fort Loudoun Reservoir. It explains the purpose of the draft RLMP and describes the process used in its development. The draft RLMP includes the planning process, which lists the objectives around which the RLMP was developed and a summary of the allocation process. The Fort Loudoun Reservoir Regional Overview (Chapter 2) describes the natural and social development of the reservoir and the surrounding area. The Parcel Descriptions (Chapter 4) include total acreage and parcel descriptions documenting proposed land management allocations. The allocation map is included as Appendix A of this draft RLMP.

Once TVA completes its Multiple RLMP EIS, this Volume will serve as the consolidated planning document addressing management of TVA reservoir lands on Fort Loudoun Reservoir and will be available to TVA staff and the public.

1.1 Tennessee Valley Authority History

President Franklin Roosevelt needed creative solutions to lift the nation out of the depths of the Great Depression, and TVA is considered one of his most innovative initiatives. Roosevelt envisioned TVA as an agency different from any other. He asked Congress to create "a corporation clothed with the power of government but possessed of the flexibility and initiative of a private enterprise." On May 18, 1933, Congress passed the Tennessee Valley Authority Act (TVA Act). A link to the TVA Act is available at https://www.tva.com/About-TVA/Our-History.

From the start, TVA established a unique problem-solving approach to fulfilling its mission: Integrated Resource Management. Each issue TVA faced, whether it was power production, navigation, flood control, malaria prevention, reforestation, or erosion control, was studied in its broadest context. TVA weighed each issue relative to the others. From this beginning, TVA has

held fast to its strategy of integrated solutions, even as the issues changed over the years. A short TVA history is available at http://www.tva.com/abouttva/history.htm.

1.2 Overview of TVA's Mission and Environmental Policy

1.2.1 TVA's Mission

TVA has a rich history of improving quality of life and economic prosperity for people and businesses in the TVA service area. TVA was created by Congress in 1933 and charged with a unique mission—to improve the quality of life in the Valley through the integrated management of the region's resources. For more than eight decades, we have worked tirelessly to carry out that mission, and we are working just as hard to make life better for the nine million people who live in the Valley today. We serve the people of the Tennessee Valley by focusing on three key areas: energy, environment, and economic development.

1.2.2 Environmental Policy

As stated in TVA's 2007 Strategic Plan, "TVA will be proactive in addressing environmental concerns, including those related to global climate change." About half of the identified strategic objectives and critical success factors in the plan relate directly to TVA's environmental activities and policy-making.

Following the release of the 2007 Strategic Plan, the TVA Board asked for the development of an integrated environmental policy to outline objectives and critical success factors across the multiple areas of TVA's activities. In 2008, the TVA Board approved the Environmental Policy, which provides guiding principles for reducing the environmental impacts of TVA operations while continuing to provide reliable and affordable power to the Valley. In 2010, a biennial review of the Environmental Policy was completed, which did not result in major changes or revisions. TVA's overarching Environmental Policy objective is to provide cleaner, reliable, and affordable energy; support sustainable economic growth in the Valley; and engage in proactive environmental stewardship in a balanced and ecologically sound manner. A copy of the Environmental Policy is available at http://www.tva.com/environment/policy.htm.

1.2.3 Land Policy

On behalf of the United States (U.S.), TVA originally acquired approximately 1.3 million acres of land in the Valley. Creation of the TVA reservoir system inundated approximately 470,000 acres with water. TVA has transferred or sold approximately 508,000 acres, the majority of which was transferred to other federal and state agencies for public uses. TVA currently controls approximately 293,000 acres of reservoir lands, which continue to be managed pursuant to the

TVA Act (Figure 1-1). As part of its management of these lands, TVA allocates them to various land use zones (see Section 3.1). These TVA-managed lands are frequently referred to as “TVA lands” in this document.

In 2006, TVA adopted a Land Policy to guide retention, disposal, and planning of real property. Accordingly, it is TVA’s policy to manage its lands to protect the integrated operation of the TVA reservoir and power systems, to provide for appropriate public use and enjoyment of the reservoir system, and to provide for continuing economic growth in the Valley. Recognizing that historical land transfers have contributed substantially to meeting multipurpose objectives, TVA maintains the policy of retaining in public ownership the reservoir lands under its control except in those rare instances where the benefits to the public will be so significant that transferring lands to private ownership or another public entity is justified. The Land Policy is available at https://www.tva.gov/Environment/Environmental-Stewardship/Land-Management/TVA-Land-Policy.

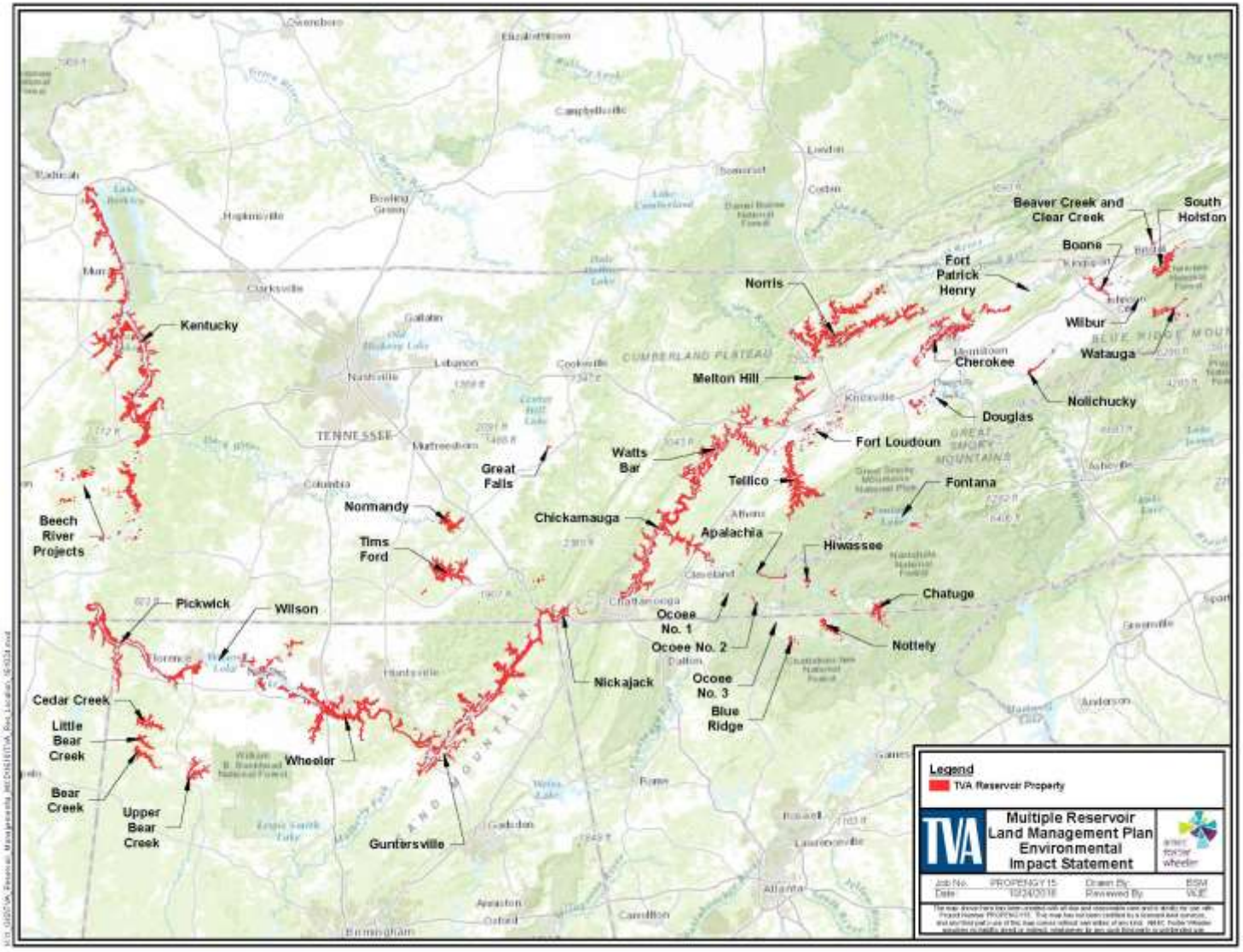


Figure 1-1. TVA Managed Reservoir Land

1.2.4 Shoreline Management Policy

In November 1998, TVA completed a Shoreline Management Initiative (SMI) EIS (TVA 1999) analyzing possible alternatives for managing residential shoreline development throughout the Valley. In April 1999, TVA adopted the agency's current Shoreline Management Policy (SMP), which incorporates a strategy of managing public shoreline through an integrated approach that conserves, protects, and enhances shoreline resources and public use opportunities while providing for reasonable and compatible use of the shoreline by adjacent residents. The SMP defines the standards for vegetation management, docks, shoreline stabilization, and other residential shoreline alterations. The SMI EIS is available at https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy.

1.3 The Natural Resource Plan

In 2011, TVA completed a Natural Resource Plan (NRP) (TVA 2011) that strategically guides the management of both renewable and nonrenewable resources, underscoring the importance of protecting those resources that will be lost forever if they are not actively protected or improved today. TVA is one piece of the solution and recognizes the need for a coordinated and collaborative effort to meet the near- and long-term resource needs. As such, the NRP is designed to:

- Integrate the objectives of six resource areas (biological, cultural, recreation, water, public engagement, and reservoir lands planning).
- Provide optimum public use benefit.
- Balance competing and sometimes conflicting resource uses.

These competing interests, coupled with today's environmental awareness and focus on preserving nonrenewable resources, underscore the necessity for a consistent approach to the management of TVA lands. The NRP represents TVA's high-level strategy for managing its natural resources in the near and long term. Detailed implementation plans, such as this draft RLMP, are being developed based on the NRP to drive specific implementation efforts. The NRP is available at https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan.

1.4 Purpose of Reservoir Land Planning

As a regional development agency and the nation's largest public power provider, TVA is committed to protecting and sustaining the environmental resources of the Valley for future generations through leadership in clean energy innovation and environmental management. In managing its public lands and resources, TVA seeks to provide efficient resource stewardship that is responsive to stakeholder interests.

TVA intends to manage its public land for an optimum level of multiple uses and benefits that protect and enhance natural, cultural, recreational, and visual resources in a cost-effective manner. Through this approach, TVA ensures that resource stewardship issues and stakeholder interests are considered while optimizing benefits and minimizing conflicts.

As part of the NRP, TVA developed a Comprehensive Valleywide Land Plan (CVLP). The CVLP guides resource management and administration decisions on the approximately 293,000 acres of TVA lands around 46 reservoirs. It identifies the most suitable uses for the land under TVA's control, identifying areas for project operations, sensitive resource management, natural resource conservation, industrial/commercial development, developed recreation, and shoreline access. The objectives of the CVLP are designed to implement TVA's mission of serving the Valley through energy, environment, and economic development. Under the CVLP methodology, TVA will develop and update RLMPs, such as this proposed plan, for a portion of a reservoir, an entire reservoir, or a group of reservoirs. RLMPs are consistent with TVA's policies and programs discussed within this chapter.

The CVLP will be recalibrated as needed (as described under Alternative B in Volume I of this EIS, TVA proposes to update the target ranges of the CVLP to incorporate the findings of the eight draft RLMPs). The CVLP was based, in part, on the anticipation that some parcels of land may be better allocated to different land use zones from those initially identified. For example, field assessments may identify additional areas that warrant the sensitive resource management allocation. In addition, during the creation or update of each individual RLMP, TVA may determine, either for its own management purposes or as a result of public input, that certain parcels of land should be used differently from how they have been used in the past. The preliminary results of the Fort Loudoun Reservoir planning effort have been included in determining the proposed revisions to the CVLP. The draft Fort Loudoun RLMP and revisions to the CVLP will be included in the five-year cyclic review of the NRP.

CHAPTER 2. REGIONAL OVERVIEW

The headwaters of the Tennessee River are in eastern Tennessee, in southwestern Virginia, western North Carolina, and in northern Georgia. The Tennessee River is formed by the confluence of the Holston and French Broad rivers just above Knoxville, Tennessee. The river flows in a southwesterly direction through Tennessee, crosses northern Alabama, forms a small portion of the northeastern boundary of Mississippi, and then flows north through western Tennessee and western Kentucky to empty into the Ohio River at Paducah, Kentucky, a distance of about 650 miles. The Tennessee River drains an area of 40,910 square miles about equal to the area of Ohio. The headwaters are in the Smoky Mountains and the Blue Ridge Mountains, which are the highest ranges east of the Rockies. The mountain region is in striking contrast to the relatively flat lands of northern Alabama and to the rolling land of western Kentucky.

The TVA Act was amended August 31, 1935, requiring TVA to report to Congress their recommendations for the unified development of the Tennessee River System. The proposed system would include nine main river, multi-purpose dams, and three or more tributary storage dams. The system would contribute substantial to the control of floods on the Tennessee River, lower Ohio River and lower Mississippi River, establish a formalized navigation channel, and provide many related benefits, including a large supply of electric power. By the end of 1970, the integrated water control system in the Valley was comprised of 32 major dams, nine on the Tennessee River and 23 on tributaries.

2.1 History of Fort Loudoun Dam

Fort Loudoun Dam was the last of seven main-river dams proposed for construction in TVA's report to Congress dated March 31, 1936, and is the upper link in the chain of dams for navigation envisioned in the TVA Act. The basic plan for the unified development of the Tennessee River included the Fort Loudoun project as the uppermost of the nine main-river projects.

During preliminary studies and investigations made by TVA, seven tentative sites were identified where the topography was fairly suitable for Fort Loudoun Dam. These sites included Sister Island (Tennessee River Mile [TRM] 605.0), Bussell Shoals (TRM 603.5), Belle Canton (TRM 602.3), Lenoir Ferry (TRM 601.6), Lenoir Shoals (TRM 601), Rock Quarry Bar (TRM 594.8), and Loudoun (TRM 592.2). After detailed engineering analysis, Belle Canton appeared to be the most favorable site from every angle. After selecting the preferred location, TVA began

to develop preliminary layouts for the project in 1938. In 1939, the Chief Engineer of TVA recommended the construction of the Fort Loudoun project. The project was described as “the next logical step in the unified development of the Tennessee River and its tributaries.” Construction of Fort Loudoun Dam started on July 8, 1940.

The concrete mixing plant was erected and began operation August 20, 1941. Reservoir clearing began May 8, 1941 and was discontinued May 19, 1941. Work was resumed August 19, 1941, and continued until the work was completed March 10, 1943. Construction of the dam required 2,938,000 cubic yards of excavation, 582,000 cubic yards of concrete, 3,472,000 cubic yards of earthfill, and 122,000 cubic yards of riprap. Peak employment occurred in November 1942 when approximately 2,600 employees were on the pay roll. During the construction period, 19,519,000 man-hours were expended on the project, of which 13,746,000 were on the dam.

Temporary lock operation began in May 1942, and the permanent lock was completed in June 1943. Dam closure was made August 2, 1943, seven months ahead of the original schedule, and the first generating unit began commercial operation in November 9, 1943. The second unit began continuous operation January 15, 1944. The project included a concrete intake, spillway, nonoverflow section and lock, which adjoin an earth embankment. The over-all length is 4,190 feet, and the maximum height is 122 feet (TVA 1949).

Today, Fort Loudoun Dam continues to provide a number of benefits. During any time of the year, commercial barges and recreational vessels can travel with a guaranteed minimum water depth for over 50 river miles from the dam to where the Tennessee River begins at the confluence of the Holston and French Broad rivers. In addition to safe navigation travel, Fort Loudoun Reservoir assists in storing flood waters that protect the city of Chattanooga as well as producing a net dependable capacity of 162 megawatts of electricity. Other benefits of the reservoir include providing a supply of drinking water to cities and towns along the river, preserving aquatic and wildlife habitats, as well as providing opportunities for a wide variety of recreational activities (TVA 1997 and TVA 2015).

2.2 Fort Loudoun Reservoir and Present Shoreline

The Fort Loudoun Reservoir, which is 55 miles in length, affects the counties of Loudon, Blount, and Knox. Major tributary streams flowing into the reservoir include the Holston River, French Broad River, and Little River. Water from these tributaries is contributed by three states: Tennessee, Virginia, and North Carolina (TVA 1949).

The reservoir has a flood-storage capacity of 111,000 acres, and the water level in Fort Loudoun Reservoir varies around 6 feet in a normal year. The minimum winter elevation for the reservoir is 807 feet mean sea level (msl), and the typical summer operating range is between 812 feet msl and 813 feet msl (TVA 2015). Fort Loudoun Reservoir was impounded to promote navigation, assist in controlling floods, and generate low-cost electricity (TVA 1997).

2.2.1 Land Use and Prime Farmland

To create this reservoir, it was necessary to acquire approximately 396 tracts of land containing approximately 6,432.4 acres of land. The total amount of land inundated by the reservoir is approximately 3,643.6 acres. TVA has transferred approximately 969.2 acres to public agencies to be managed for recreation and 306.4 acres have been sold to private entities. The remaining approximate 1,513.4 acres are the scope of this RLMP.

The area surrounding the reservoir is primarily rural. The shoreline of the reservoir is comprised of a variety of land uses including forested areas, residential development, recreational areas, farmed areas and a relatively small amount of industrial and commercial uses primarily located in the vicinity of the larger cities. These uses are generally reflected in the land cover database for the parcels around the reservoir and the surrounding area which classifies the land cover in these areas as primarily forested and pasture land and developed open space. Developed open space includes single family housing units on large lots, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes.

According to TVA's 1998 SMI EIS, TVA owns approximately 74 miles of the 378 total miles of shoreline (20 percent) on Fort Loudoun Reservoir (see Volume I, Table 3-1). Approximately 80 percent of the shoreline miles on this reservoir is privately owned, and is available for residential shoreline access development (see Volume I, Table 3-2). In the SMI EIS, TVA estimated that of that 80 percent, approximately 63 percent of this privately- owned shoreline is currently developed with residential subdivisions. TVA has holds flowage easement rights along portions of this private shoreline.

As identified above, TVA originally purchased approximately 6,432.4 acres of land in fee for Fort Loudoun Reservoir, some of this land has been sold, transferred to public agencies to be managed for recreation, or is inundated. However, any structures placed within existing flowage easements are subject to Section 26a of the TVA Act. Section 26a is designed to ensure that construction along the shoreline and in waters of the Tennessee River system and the TVA reservoirs does not adversely impact TVA's responsibility for managing the river system and for

achieving "Unified Development and Regulation of the Tennessee River." For more information on TVA's SMP, see Section 3.4 of this draft RLMP.

TVA public land on the Fort Loudoun Reservoir contains 240 acres of prime farmland and 96.2 acres of farmland of state importance (Table 2-1). Prime farmland has soil with the best combination of physical and chemical characteristics for producing food and fiber and is protected from conversion to industrial and nonagricultural uses by the United States Department of Agriculture (USDA). It is noted, however, that current soil mapping of prime farmland soils does not account for existing developed uses that may have previously disturbed and potentially converted prime farmland.

The majority (149.9 and 53.4 acres, respectively) of both prime farmland and farmland of statewide importance acreage occurs in Zone 6 (Developed Recreation) where major soil disturbances could occur in specific locations, if recreation facilities are constructed. Conversely, large areas could remain unaffected for more dispersed recreation management. Only 34.4 acres of prime farmland and 29.3 acres of farmland of statewide importance occur in Zones 3 and 4 which are zones that house uses that have little or no soil disturbance. Major soil disturbance could occur when TVA facilities or other public facilities are constructed in lands designated for Zone 2, which includes 43.5 acres of prime farmland and 5.3 acres of farmland of statewide importance. However, most parcels designated for Zone 2 already contain facilities that are not likely to require substantial modification. The least amount of prime farmland (2.7 acres) and farmland of statewide importance (0 acre) occurs in Zone 5.

Table 2-1. Prime Farmland and Farmland of Statewide Importance in Fort Loudoun Reservoir

Zone	Prime Farmland (acres)	Farmland of Statewide Importance (acres)
Zone 2 - Project Operations	43.5	5.3
Zone 3 - Sensitive Resource Management	17.7	0.5
Zone 4 - Natural Resource Conservation	16.7	28.8
Zone 5 – Industrial	2.7	0
Zone 6 - Developed Recreation	149.9	53.4
Zone 7 - Shoreline Access	9.6	8.2
Total	**240.0**	**96.2**

Source: USDA NRCS 2016

For more information on land use and prime farmland resources and the potential impacts of the draft RLMP, see Volume I, Sections 3.2 and 3.3.

2.2.2 Recreation

TVA provides public lands for developed and dispersed recreational purposes through the reservoir lands planning process. Developed recreation includes campgrounds, lodges, marinas, boat-launching ramps, parks, swimming pools, beaches and golf courses. Dispersed recreation activities include picnicking, primitive camping, hiking, bank fishing, hunting, kayaking and canoeing. In 2005, TVA developed a recreation strategic plan aimed at collaboratively enhancing recreational opportunities and addressing unmet recreational needs while managing the resources of the Tennessee River system (TVA 2005). This strategy laid out guiding principles for how to best design and develop recreation opportunities. During this reservoir lands planning effort, tracts of TVA-managed lands around Fort Loudoun Reservoir were categorized based upon a suitable use that is consistent with TVA policy and guidelines and applicable laws and regulations.

On Fort Loudoun Reservoir, developed recreation provides modern facilities and amenities such as campgrounds, developed boat launches/ramps, parks and a myriad of day use facilities (picnic areas, swimming beaches, and fishing piers). These uses primarily occur on TVA lands allocated to Zone 6 (Developed Recreation) and Zone 2 (Project Operations). On Fort Loudoun Reservoir, approximately 39 percent (590.8 acres) of TVA land is proposed for allocation to Zone 6 and approximately 31 percent (477.2 acres) is proposed for allocation to Zone 2 (see Figure 3-1).

Fort Loudoun Reservoir is an outdoor recreation resource that attracts visitors from within the Knoxville Metropolitan Area and outside the region. A total of 32 parcels contain 54 developed recreation areas on Fort Loudoun Reservoir. Many of these recreation areas are located on properties that TVA transferred, leased or licensed for recreation development and use. Public parks developed on lands made available by TVA include Anchor Park, Carl Cowen Park, Concord Park, Louisville Point Park, Maloney Road Park, Marine Park, and Louisville Park. Concord Park, managed by Knox County, has trails, boat-launching ramps, fishing piers, picnic facilities, sports fields, swimming pool, and a swimming beach. Other public agencies have also developed boat-launching ramps (City of Knoxville) on TVA lands at strategic locations around the reservoir. Commercial recreation operations include Fort Loudoun Dam Marina, Lane's Landing Marina, Louisville Landing Marina, Southland RV Park, Volunteer Landing Marina Whispering Cove Marina and Willow Point Marina. A notable developed area includes the Fort

Loudoun Dam Marina. Fort Loudoun Dam Marina is one of the largest marinas on the TVA reservoir system and is located just above the Fort Loudoun Dam.

Table 2-2 itemizes developed recreation area lands that are managed by TVA or another public agency for recreation purposes. Table 2-3 summaries commercial, private, and semi-private developed recreation areas. Tables 2-2 and 2-3 do not itemize recreation areas on non-TVA shorelands (Zone 1) because these areas are beyond the scope of this draft RLMP. Fort Loudoun Reservoir parcel descriptions (see Chapter 4) further describe the management entity and management descriptions of recreation facilities on lands managed by either TVA or under contractual agreement.

On Fort Loudoun Reservoir, dispersed recreation areas provide unconfined opportunities that are predominantly nature-based or water-based. Dispersed recreation could occur on lands allocated to Zone 2 (Project Operations) and undeveloped areas allocated Zone 6 (Developed Recreation) as well as on land allocated to Zone 3 (Sensitive Resource Management) or, Zone 4 (Natural Resource Conservation). For example, on lands allocated to Zone 4 (Natural Resource Conservation) dispersed recreation activities include hunting, wildlife observation, fishing and camping on undeveloped sites.

Table 2-2. Developed Public Recreation Areas on TVA Lands on the Fort Loudoun Reservoir

Recreation Area	Managing Entity	Parcel Location
Fort Loudoun Dam Reservation	TVA	3
Lenoir City Park	Lenoir City	5
Boat Ramp	State of Tennessee	14
Concord Park	Knox County	21
Anchor Park	Town of Farragut	24
Carl Cowen Park	Knox County	33
Sequoyah Park	City of Knoxville	48
Boat Ramp	City of Knoxville	52
Volunteer Landing	City of Knoxville	55
Recreation Area	City of Knoxville	57
Marine Park	Knox County	59
Maloney Road Park	Knox County	60
I.C. King Park	Knox County	65
Boat Ramp	State of Tennessee	70
Little River Boat Ramp	TVA	72
Singleton Recreation Area	Blount County	76
Boat Ramp	State of Tennessee	85

Recreation Area	Managing Entity	Parcel Location
Louisville Point Park	Blount County	99
Poland Creek Recreation Area	City of Louisville	103
Ish Creek Boat Ramp	TVA	111
Boat Ramp	State of Tennessee	113
Boat Ramp	State of Tennessee	114
Boat Ramp	State of Tennessee	118
Paddle Boat Putt In	TVA/TWRA	125

Table 2-3. Developed Commercial, Private and Semi-Private (camps) Recreation Areas on TVA Lands on the Fort Loudoun Reservoir

Recreation Area	Managing Entity	Parcel Location
Lane's Landing Bait and Tackle	Commercial	2
Fort Loudoun Marina	Commercial	5
Group Camp	Private Party	13
Willow Point Marina	Commercial	68
Southland RV Park	Commercial	68
Louisville Landing Marina	Commercial	93
Whispering Cover Marina	Commercial	113
Campground	Commercial	122

For more information on recreation resources and the potential impacts of the draft RLMP, see Volume I, Section 3.4.

2.2.3 Terrestrial Ecology

Fort Loudoun Reservoir lies within the Ridge and Valley ecoregion (U.S. Environmental Protection Agency 2013). The Ridge and Valley Ecoregion contains long stretches of ridges with adjacent valleys that run in a southwestern-to-northeastern direction. The variety of landforms, soils, climate, and geology across the Ridge and Valley have allowed for an extremely diverse assemblage of animals, including migratory birds of conservation concern. Deciduous forests and mixed evergreen-deciduous forests provide wildlife habitat among the intense agriculture and urban sprawl (U.S. Geologic Survey [USGS] 2016). Table 2-4 contains a summary of the land cover within and in the vicinity of Fort Loudoun Reservoir (Homer et al. 2015).

Table 2-4. Land Cover on TVA Owned Parcels and within the Vicinity of Fort Loudoun Reservoir

Land Cover Type	TVA Property		Vicinity (5-Mile Radius)	
	Acres[1]	Percent Cover (%)	Acres[1]	Percent Cover (%)
Barren Land	8.3	0.6	681.8	0.2
Developed		0.0		0.0
Developed, High Intensity	12.5	0.8	7418.9	2.1
Developed, Medium Intensity	175.0	11.6	45255.0	12.9
Developed, Low Intensity	51.6	3.4	22457.5	6.4
Developed, Open Space	178.1	11.9	60917.3	17.4
Forest		0.0		0.0
Deciduous Forest	435.6	29.0	85918.3	24.6
Evergreen Forest	138.3	9.2	13463.6	3.9
Mixed Forest	101.0	6.7	9860.3	2.8
Shrubland		0.0		0.0
Shrub/Scrub	10.5	0.7	2370.0	0.7
Herbaceous		0.0		0.0
Grassland/Herbaceous	15.4	1.0	4949.3	1.4
Hay/Pasture	136.2	9.1	73139.6	20.9
Planted/Cultivated		0.0		0.0
Cultivated Crops	1.1	0.1	2517.1	0.7
Wetlands/Open Water		0.0		0.0
Woody Wetlands	61.5	4.1	2130.6	0.6
Emergent Herbaceous Wetlands		0.0	77.27	0.0
Open Water	177.3	11.8	18466.8	5.3
Total	**1,502.3**	**100**	**349,623.5**	**100**

[1] Source: Homer et al. 2015

Oak-hickory deciduous forest is the most abundant forest type in the eastern U.S. and is prevalent in the Fort Loudoun Reservoir region. Some mixed deciduous-evergreen and evergreen forests are also present in this region. Numerous bird species nest in deciduous forests. Typical species include wild turkey, whip-poor-will, ruby-throated hummingbird, red-eyed vireo, wood thrush, black-throated green warbler, black-and-white warbler, ovenbird, hooded warbler, and scarlet tanager. Several additional migratory bird species of concern utilize these habitats in this area including black-billed cuckoo, Kentucky warbler, peregrine falcon, wood thrush and worm-eating warbler (USFWS 2016a). Common mammal species of deciduous forests include black bear, white-tailed deer, red bat, eastern chipmunk, eastern gray and

southern flying squirrels, white-footed mouse, southern red-backed and woodland voles, short-tailed shrew, gray fox, and bobcat.

Deciduous forests and mixed evergreen-deciduous forests account for 36 percent of the land cover for the Fort Loudoun Reservoir parcels (see Table 2-4). Evergreen forests make up an additional 9 percent of the land cover. Seeps, streams, and temporary ponds in deciduous forests provide habitat for numerous amphibians including American and Fowler's toads, green frog, northern cricket frog, and other frogs, and a range of salamanders including spotted salamanders. Reptiles commonly found in deciduous forests especially near water include eastern fence lizard, ground skink, five-lined skink, eastern box turtle, eastern worm-snake, black racer, and ring-necked snake. The riparian zones along streams within deciduous forests provide nesting habitat for Acadian flycatchers, northern parula, and a migratory species of concern in this area, the Louisiana waterthrush (USFWS 2016a).

Evergreen and mixed evergreen-deciduous forests provide nesting for woodland birds including pine and yellow-throated warblers, and great crested flycatcher. Several additional migratory bird species of concern utilize these habitats in this area including black-billed cuckoo, black-capped chickadee, Canada warbler, fox sparrow, Kentucky warbler, olive-sided flycatcher, prairie warbler, and red crossbill (USFWS 2016a). Portions of this forest type have been damaged by southern pine beetles in recent years. Several stands of dead pines exist on TVA lands, and TVA has performed salvage harvests in some stands. Dead pines provide foraging sites for woodpeckers and roosting sites for little brown and silver-haired bats. Other animals that inhabit evergreen and evergreen-deciduous forests but are not restricted to them include white-tailed deer, wild turkey, black bear, eastern mole, southern bog lemming, eastern kingsnake, smooth earth-snake, eastern fence lizard, six-lined racerunner, and a variety of salamanders, frogs, and toads, especially near wet areas.

Most of the TVA lands consist of narrow strips or small blocks of forest. Many of these lands are adjacent to larger contiguous forest blocks contributing habitat to area-sensitive species of wildlife that favor interior woodland habitats. Many of these adjacent lands were formerly owned by TVA and transferred to other federal agencies such as the U.S. Forest Service and the National Park Service, and to state agencies. These lands combine with the TVA lands to form large blocks of forested habitat adjacent to the reservoir.

Non-forested herbaceous community types in the Fort Loudoun Reservoir region are dominated by pasturelands and hayfields. Herbaceous habitats, including grasslands, barrens, hayfields, and pastures account for approximately 10 percent of the land cover on the reservoir parcels

(see Table 2-4). Early successional habitats provide habitat for a variety of bird species including eastern bluebird, eastern meadowlark, American crow, and red-tailed hawk. Additional migratory bird species of concern utilize these habitats in this area including short-eared owl and willow flycatcher (USFWS 2016a). Amphibians and reptiles that use these habitats include spring peeper, chorus frog, and common garter snake.

Bird and mammal diversity greatly increases at edge habitats especially those between forested areas bordered by early successional habitats. Birds commonly found at these edge habitats include wild turkey, great crested flycatcher, white-eyed vireo, Carolina wren, blue-gray gnatcatcher, brown thrasher, common yellowthroat, yellow-breasted chat, indigo bunting, eastern towhee, field and song sparrow, and orchard oriole. Several additional migratory bird species of concern utilize these habitats in this area including black-capped chickadee, blue-winged warbler, loggerhead shrike, peregrine falcon, and willow flycatcher (USFWS 2016a). Mammals typically inhabiting edges include eastern cottontail, eastern harvest mouse, red fox, coyote, long-tailed weasel, and striped skunk.

The reservoir parcels provide wetlands, including wooded swamps and open water habitats, and associated riparian zones that are used by a variety of wildlife. Common species include great blue heron, green heron, belted kingfisher, common yellowthroat, and northern parula. Twelve colonial nesting bird colonies/heronries have been observed on TVA parcels on Fort Loudoun Reservoir (TVA 2016a). Many additional migratory bird species of concern utilize these habitats in this area including bald eagle, Louisiana waterthrush, rusty blackbird, short-eared owl, and willow flycatcher (USFWS 2016a). Shallow embayments, especially those with emergent vegetation, provide foraging habitat for waterfowl. Common waterfowl include wood ducks, Canada geese, and mallards. Other waterfowl periodically present include American black duck, gadwall, green-winged teal, ring-necked duck, lesser scaup, common goldeneye, bufflehead, and hooded merganser.

Shorebird use of the Fort Loudoun Reservoir is limited to shallow embayments and exposed mud flats. Species such as spotted sandpiper that forage along the margins of reservoirs and killdeer that are not restricted to foraging on mud flats are commonly observed. Common amphibians found in the riparian zones include green frog, eastern narrowmouth toad, and Fowler’s toad. Reptiles include northern water snake, common snapping turtle, and painted turtles. Common mammals include mink, muskrat, raccoon, and American beaver.

A search of the TVA Natural Heritage database in May 2016 indicated that 105 caves are located within 3 miles of Fort Loudoun Reservoir. Two caves are located on TVA parcels (TVA 2016a).

2.2.3.1 Invasive Nonnative Species

Many of the planned TVA parcels around Fort Loudoun Reservoir contain a substantial amount of invasive nonnative species. Executive Order (EO) 13112 defines an invasive nonnative species as any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem; and whose introduction does or is likely to cause economic or environmental harm or human health (Federal Register Vol. 64, No. 25, February 3, 1999).

The Southeastern Exotic Plant Pest Council provides a list of nonnative invasive species that could pose potential threats to native ecosystems and human health for each southeastern state. In reviewing the Tennessee exotic plant pest list (Tennessee Exotic Plant Pest Council 2009), there were 26 species occurring in Tennessee that pose a severe threat to native ecosystems observed in the Fort Loudoun Reservoir region (Table 2-5).

Table 2-5. Invasive Non-Native Plant Species that Pose a Severe Threat Known to Occur in Tennessee

Common Name	Scientific Name
Asian bittersweet	*Celastrus orbiculatus*
Autumn olive	*Elaeagnus umbellata var. parviflora*
Cheat grass	*Bromus tectorum*
Chinese privet	*Ligustrum sinense*
Chinese yam	*Dioscorea oppositifolia*
Common privet	*Ligustrum vulgare*
Common St. John's-wort	*Hypericum perforatum*
Hydrilla	*Hydrilla verticillata*
Japanese honeysuckle	*Lonicera japonica*
Japanese knotweed	*Polygonum cuspidatum*
Japanese stiltgrass	*Microstegium vimineum*
Johnson grass	*Sorghum halepense*
Korean clover	*Kummerowia stipulacea*
Kudzu	*Pueraria montana* var. *lobata*
Mimosa	*Albizia julibrissin*
Multiflora rose	*Rosa multiflora*
Princess tree	*Paulownia tomentosa*

Common Name	Scientific Name
Purple loosestrife	*Lythrum salicaria*
Sericia lespedeza	*Lespedeza cuneata*
Shrubby bushclover	*Lespedeza bicolor*
Tree of heaven	*Ailanthus altissima*

Source: Tennessee Exotic Plant Pest Council 2009

All of these species have the potential to adversely impact the native plant communities because of their potential to spread rapidly and displace native vegetation. TVA considers all of the species a severe threat to local plant communities.

In addition to invasive or non-native plant species discussed above, there are several exotic, non-native, and/or pest insect species and plant diseases that are known to occur within the counties encompassing Fort Loudoun Reservoir. These insects and diseases can have devastating impacts on native plant communities and human crops/fruits. The insects include: Japanese beetle (*Popillia japonica),* brown marmorated stink bug (*Halyomorpha halys*), emerald ash borer (*Agrilus planipennis*), hemlock woolly adelgid (A*delges tsugae*), kudzu bug (*Megacopta cribraria*), spruce beetle (*Dendroctonus rufipennis*), and southern pine beetle (*Dendroctonus frontalis*) (EDDMapS 2016). These species all have the potential to pose problems to native vegetation, wildlife, crops, landscaping and gardens, and/or overall ecosystems due to the lack of natural predators or diseases to help control their populations giving them the ability to out-compete native species.

The following plant diseases are also known to occur in the counties containing Fort Loudoun Reservoir: butternut canker (*Sirococcus clavigignenti-juglandacearum*), dogwood anthracnose (*Discula destructive*), Heterobasidion root rots (*Heterobasidion* spp.), oak wilt (*Ceratocystis fagacearum*), white pine blister rust (*Cronartium ribicola*), Neonectria canker (*Neonectria faginata*), and thousand cankers disease (*Geosmithia morbida*). Many of these diseases target certain plant species or groups of species, and can have serious impacts to local populations of those plants and trees.

In addition to invasive or non-native plant species, and insects and diseases that pose threats to plants and crops, there are several exotic, non-native, and/or pest terrestrial wildlife and insect species that are known to occur within the region. These include: Asian tiger mosquito (*Aedes albopictus*), cat (feral) (*Felis catus*), and European starling (*Sturnus vulgaris*) (EDDMapS 2016). These species have the potential to pose problems to native wildlife and ecosystems due to

their ability to out-compete native species and spread quickly. Some of these species can pose threats to human health and safety. Asian tiger mosquitoes are known to transmit various diseases to humans.

2.2.4 Aquatic Ecology

Unimpounded rivers of the Ridge and Valley Ecoregion typically consist of limestone rubble and bedrock riffles, sandy silty pools, and some extensive sand and gravel shoals (Etnier and Starnes 1993). These conditions exist in upper reaches of reservoirs where free-flowing streams transition into impounded reservoirs as well as in reservoir tailwaters. Hypolimnetic water discharged into the tailwaters can be very cold and have low dissolved oxygen content that may impair water quality. Subsequently, the stretch of river directly downstream of dams can have less diverse aquatic communities as compared to pre-impoundment conditions. TVA has improved water quality below many of its hydroelectric facilities including implementation of measures designed to mimic more natural riverine conditions.

Aquatic ecological conditions in streams and reservoirs are monitored under a number of TVA programs. Aquatic ecological conditions in the larger reservoirs have been monitored using the Reservoir Vital Signs Monitoring Program (RVSMP), which focuses on (1) physical and chemical characteristics of waters; (2) physical and chemical characteristics of sediments; (3) sampling the benthic macroinvertebrate community; and (4) fish assemblage sampling. The RVSMP data include annual fish sampling on tributary reservoirs a two-year rotation sampling cycle. Ratings are based primarily on fish community structure and function, using an analysis tool known as the Reservoir Fish Assemblage Index (RFAI) (McDonough and Hickman 1999).

Both RFAI and benthic community samples were taken in the forebay area (near the dam) and transition zone of Fort Loudoun Reservoir where the reservoir transitions from a river-like environment to a lake-like one (Table 2-6).

Table 2-6. RFAI and Benthic Community Scores for Fort Loudoun Reservoir (2011-2015)

Year	RFAI Scores		Benthic Community Scores	
	Forebay	Transition	Forebay	Transition
2011	Fair	Fair	Poor	Fair
2013	Fair	Fair	Poor	Fair
2015	Good	Fair	Poor	Poor

Source: TVA 2016b

The fish species collected during the RVSMP sampling efforts represent typical species found in large river and lentic habitats (Table 2-7). The variety of fish collected in the Fort Loudoun Reservoir was good, but catch rates were slightly lower than desired and composition was dominated by a few species such as gizzard shad, bluegill and/or largemouth bass. Overall, the fish community typically scores good or at the upper end of the fair range at the forebay and transition, while scores at the inflow have generally fluctuated within the fair range.

Table 2-7. Fish Species in Fort Loudoun Reservoir

Common Name	Scientific Name
American brook lamprey	*Lampetra appendix*
Banded sculpin	*Cottus carolinae*
Bigeye chub	*Hybopsis amblops*
Black buffalo	*Ictiobus niger*
Black crappie	*Pomoxis nigromaculatus*
Black redhorse	*Moxostoma duquesnei*
Blackspotted topminnow	*Fundulus olivaceus*
Blackstripe topminnow	*Fundulus notatus*
Blue catfish	*Ictalurus furcatus*
Bluegill	*Lepomis macrochirus*
Bluntnose minnow	*Pimephales notatus*
Brook silverside	*Labidesthes sicculus*
Bullhead minnow	*Pimephales vigilax*
Channel catfish	*Ictalurus punctatus*
Common carp	*Cyprinus carpio*
Flathead catfish	*Pylodictis olivaris*
Freshwater drum	*Aplodinotus grunniens*
Gizzard shad	*Dorosoma cepedianum*
Golden redhorse	*Moxostoma erythrurum*
Golden shiner	*Notemigonus crysoleucas*
Green sunfish	*Lepomis cyanellus*
Hybrid striped x white bass	*Hybrid morone (chrysops x sax)*
Lake sturgeon	*Acipenser fulvescens*
Largemouth bass	*Micropterus salmoides*
Logperch	*Percina caprodes*
Longnose gar	*Lepisosteus osseus*
Mississippi silverside	*Menidia audens*
Northern hog sucker	*Hypentelium nigricans*
Quillback	*Carpiodes cyprinus*
Redbreast sunfish	*Lepomis auritus*
Redear sunfish	*Lepomis microlophus*
River carpsucker	*Carpiodes carpio*
River redhorse	*Moxostoma carinatum*

Common Name	Scientific Name
Rock bass	*Ambloplites rupestris*
Sauger	*Stizostedion canadense*
Silver redhorse	*Moxostoma anisurum*
Skipjack herring	*Alosa chrysochloris*
Smallmouth bass	*Micropterus dolomieu*
Smallmouth buffalo	*Ictiobus bubalus*
Snubnose darter	*Etheostoma simoterum*
Spotfin shiner	*Cyprinella spiloptera*
Spotted bass	*Micropterus punctulatus*
Spotted gar	*Lepisosteus oculatus*
Spotted sucker	*Minytrema melanops*
Striped bass	*Morone saxatilis*
Striped shiner	*Luxilus chrysocephalus*
Tangerine darter	*Percina aurantiaca*
Threadfin shad	*Dorosoma petenense*
Walleye	*Stizostedion vitreum*
Warmouth	*Lepomis gulosus*
White bass	*Morone chrysops*
White crappie	*Pomoxis annularis*
Yellow bass	*Morone mississippiensis*
Yellow perch	*Perca flavescens*

Source: TVA 2016c

Bottom life (benthic community) has rated poor at the forebay each sampling year since 2011 and fair to poor at the mid-reservoir location. Relatively few organisms are usually collected from the forebay location, and those collected are primarily species capable of tolerating poor conditions. Bottom life at the transition location typically rates fair due to greater diversity, which includes a better representation of intolerant species such as mayflies.

2.2.4.1 Invasive Nonnative Aquatic Species

Although there are many exotic or introduced aquatic species within the region, there are a few species that are considered more detrimental due to their ability to have broad impacts to overall aquatic systems as well as direct impacts to humans. These include Asian carp, especially bighead carp (*Hypophthalmichthys nobilis*) and silver carp (*Hypophthalmichthys molitrix*) (EDDMapS 2016), and zebra mussels (*Dreissena polymorpha*).

Asian carp cause serious damage to the native fish populations in the lakes and rivers that they infest because they out-compete other fish for food and space. Carp are also thought to lower

water quality, which can kill off sensitive organisms like native freshwater mussels. Asian carp have been known to dominate entire streams, effectively pushing out the native species. Asian carp are also known to pose danger to humans due to their habit of jumping out of the water and striking boaters and water skiers and damaging boats and equipment.

Zebra mussels are notorious for their biofouling capabilities by colonizing water supply pipes of hydroelectric and nuclear power plants, public water supply plants, and industrial facilities. They colonize pipes constricting flow, therefore reducing the intake in heat exchangers, condensers, firefighting equipment, and air conditioning and cooling systems. Navigational and recreational boating can be affected by increased drag due to attached mussels. Small mussels can get into engine cooling systems causing overheating and damage. Navigational buoys have been sunk under the weight of attached zebra mussels. Zebra mussels can have profound effects on the ecosystems they invade. They primarily consume phytoplankton, but other suspended material is filtered from the water column including bacteria, protozoans, zebra mussel veligers, other microzooplankton and silt (Benson et al. 2016).

For information on aquatic ecology and potential impacts of the draft RLMP, see Volume I, Section 3.6.

2.2.5 Threatened and Endangered Species

TVA biologists and natural resource specialists used the TVA Natural Heritage database to assess the endangered and threatened species within and around Fort Loudoun Reservoir. The TVA Natural Heritage database was created to ensure that environmental compliance activities are conducted in a consistent manner across the TVA Region and that these activities meet the requirements of the National Environmental Policy Act (NEPA) and the Endangered Species Act. Federally listed and state-listed species identified from the TVA Natural Heritage database searches that are known to occur in the counties surrounding Fort Loudoun Reservoir are presented in Table 2-8. For the purpose of this document state-listed species includes those that are being tracked, in need of management, candidates, proposed for listing and of special concern. As noted below, there are no federally or state-listed plants species occurring on TVA parcels on Fort Loudoun Reservoir. There is one terrestrial wildlife species known to occur on TVA parcels, however, suitable habitat is present for many of the other listed species. No listed aquatic species are known to occur within TVA parcels, but 12 are known to occur in the reservoir adjacent to the parcels.

Table 2-8. Federally and State-Listed Species in the Fort Loudoun Reservoir Counties

Common Name	Scientific Name	Status[1]	
		Federal	State (Rank)
Mammals			
Carolina northern flying squirrel	*Glaucomys sabrinus coloratus*	LE	E (S1S2)
Gray bat	*Myotis grisescens*	LE	E (S2)
Hairy-tailed mole	*Parascalops breweri*	--	D (S3)
Indiana bat	*Myotis sodalis*	LE	E (S1)
Northern long-eared bat	*Myotis septentrionalis*	LT	S1S2
Rafinesque's big-eared bat	*Corynorhinus rafinesquii*	--	D (S3)
Smoky shrew	*Sorex fumeus*	--	D (S4)
Southeastern shrew	*Sorex longirostris*	--	D (S4)
Southern Appalachian woodrat	*Neotoma floridana haematoreia*	--	D (S2)
Southern bog lemming	*Synaptomys cooperi*	--	D (S4)
Woodland jumping mouse	*Napaeozapus insignis*	--	D (S4)
Birds			
Bald eagle	*Haliaeetus leucocephalus*	DM	D (S3)
Common barn-owl	*Tyto alba*	--	D (S3)
Common moorhen	*Gallinula chloropus*	PS	D (S1B)
Common raven	*Corvus corax*	--	T (S2)
King rail	*Rallus elegans*	--	D (S2)
Least bittern	*Ixobrychus exilis*	--	D (S2B)
Peregrine falcon	*Falco peregrinus*	PS:LE	E (S1B)
Sharp-shinned hawk	*Accipiter striatus*	PS	D (S3BS4N)
Swainson's warbler	*Limnothlypis swainsonii*	--	D (S3)
Virginia rail	*Rallus limicola*	--	TRKD (S1BS3N)
Yellow-bellied sapsucker	*Sphyrapicus varius*	--	D (S1BS4N)
Reptiles			
Eastern slender glass lizard	*Ophisaurus attenuatus longicaudus*	--	D(S3)
Northern pine snake	*Pituophis melanoleucus*	--	T (S3)
Amphibians			
Berry Cave salamander	*Gyrinophilus gulolineatus*	C	T (S1)
Four-toed salamander	*Hemidactylium scutatum*		D (S3)
Hellbender	*Cryptobranchus alleganiensis*	PS	D (S3)
Tennessee cave salamander	*Gyrinophilus palleucus*		T (S2)
Insects			
Allegheny snaketail	*Ophiogomphus incurvatus alleghaniensis*	--	TRKD (S1)
Margaret's river cruiser	*Macromia margarita*	--	TRKD (S2S3)

Common Name	Scientific Name	Status[1]	
		Federal	State (Rank)
Crustaceans			
A cave amphipod	*Stygobromus fecundus*	--	TRKD (S1)
A cave obligate isopod	*Stygobromus sparsus*	--	TRKD (S1)
Gastropods			
Anthony's river snail	*Athearnia anthonyi*	LE	E (S1)
Ornate bud	*Pilsbryna aurea*	--	TRKD (S1)
Ornate rocksnail	*Lithasia geniculata*	--	TRKD (S2)
Spiny riversnail	*Io fluvialis*	--	TRKD (S2)
Mussels			
Birdwing pearlymussel	*Lemiox rimosus*	LE	E (S1)
Cumberland monkeyface	*Quadrula intermedia*	LE	E (S1)
Dromedary pearlymussel	*Dromus dromas*	LE	E (S1)
Fanshell	*Cyprogenia stegaria*	LE	E (S1)
Fine-rayed pigtoe	*Fusconaia cuneolus*	LE	E (S1)
Green blossom pearlymussel	*Epioblasma torulosa gubernaculum*	LE	EXTI (SX)
Orange-foot pimpleback	*Plethobasus cooperianus*	LE	E (S1)
Pink mucket	*Lampsilis abrupta*	LE	E (S2)
Ring Pink	*Obovaria retusa*	LE	E (S1)
Sheepnose	*Plethobasus cyphyus*	LE	TRKD (S2S3)
Shiny pigtoe pearlymussel	*Fusconaia cor*	LE	E (S1)
Tan riffleshell	*Epioblasma florentina walkeri*	LE	E (S1)
Tennessee clubshell	*Pleurobema oviforme*	--	TRKD (S2S3)
Tuberculed blossom pearlymussel	*Epioblasma torulosa*	LE	EXTI (SX)
Turgid blossom pearlymussel	*Epioblasma turgidula*	LE	EXTI (SX)
Fish			
Ashy darter	*Etheostoma cinereum*	--	T (S2S3)
Blotchside logperch	*Percina burtoni*	--	D (S2)
Blue sucker	*Cycleptus elongatus*	--	T (S2)
Citico darter	*Etheostoma sitikuense*	LE	E (S1)
Flame chub	*Hemitremia flammea*	--	D (S3)
Highfin carpsucker	*Carpiodes velifer*	--	D (S2S3)
Lake sturgeon	*Acipenser fulvescens*	--	E (S1)
Longhead darter	*Percina macrocephala*	--	T (S2)
Marbled darter	*Etheostoma marmorpinnum*	LE	E (S1)
Smoky dace	*Clinostomus funduloides ssp. 1*	--	D (S1S2)
Smoky madtom	*Noturus baileyi*	LE	E (S1)
Snail darter	*Percina tanasi*	LT	T (S2S3)
Spotfin chub	*Erimonax monachus*	LT	T (S2)
Tangerine darter	*Percina aurantiaca*	--	D (S3)

Common Name	Scientific Name	Status[1]	
		Federal	State (Rank)
Tennessee dace	*Chrosomus tennesseensis*	--	D (S3)
Yellowfin madtom	*Noturus flavipinnis*	LT	E (S1)
Plants			
Alternateleaf archidium moss	*Archidium alternifolium*	--	T (S1)
American barberry	*Berberis canadensis*	--	SPCO (S2)
American funaria moss	*Funaria americana*	--	T (S1?)
American ginseng	*Panax quinquefolius*	--	S-CE (S3S4)
American pillwort	*Pilularia americana*	--	SPCO (S1S2)
Bitter Cress	*Cardamine flagellifera*	--	T (S2)
Blomquist leafy liverwort	*Lejeunea blomquistii*	--	SPCO (S1S2)
Blue Ridge St. John's-wort	*Hypericum mitchellianum*	--	T (S2)
Branching burreed	*Sparganium androcladum*	--	E (S1)
Branching whitlow-wort	*Draba ramosissima*	--	SPCO (S2)
Broadleaf bunchflower	*Melanthium latifolium*	--	E (S1S2)
Budding tortula	*Rhachithecium perpusillum*	--	SPCO (SH)
Buffalo clover	*Trifolium reflexum*	--	E (S1)
Butternut	*Juglans cinerea*	--	T (S3)
Chokecherry	*Prunus virginiana*	--	SPCO (S1)
Climbing fumitory	*Adlumia fungosa*	--	T (S2)
Creamflower tick-trefoil	*Desmodium ochroleucum*	--	E (S1)
Creekgrass	*Potamogeton epihydrus*	--	SPCO (S1S2)
Drooping bluegrass	*Poa saltuensis*	--	T (S1)
Dwarf filmy-fern	*Trichomanes petersii*	--	T (S2)
Eastern turkeybeard	*Xerophyllum asphodeloides*	--	T (S3)
Foxtail sedge	*Carex alopecoidea*	--	SPCO (SH)
Fraser's sedge	*Cymophyllus fraserianus*	--	SPCO (S3)
Fringed black bindweed	*Polygonum cilinode*	--	T (S1S2)
Hairy false gromwell	*Onosmodium hispidissimum*	--	E (S1)
Hot porella	*Porella gracillima*	--	E (S1)
Large-leaf pondweed	*Potamogeton amplifolius*	--	T (S1)
Leather-flower	*Clematis glaucophylla*	--	E (S1)
Liverwort	*Lophocolea appalachiana*	--	SPCO (S1)
Liverwort	*Porella wataugensis*	--	T (S1S2)
Liverwort	*Radula voluta*	--	SPCO (S2)
Longleaf stitchwort	*Stellaria longifolia*	--	E (S1)
Marsh bellflower	*Campanula aparinoides*	--	SPCO (S2)
Marsh pea	*Lathyrus palustris*	--	SPCO (S1)
Mountain honeysuckle	*Lonicera dioica*	--	SPCO (S2)
Mountain wavy-leaf moss	*Plagiomnium carolinianum*	--	SPCO (S1)
Naked-stem sunflower	*Helianthus occidentalis*	--	SPCO (S2)

Common Name	Scientific Name	Status[1]	
		Federal	State (Rank)
Pale green orchid	*Platanthera flava* var. *herbiola*	--	T (S2)
Prairie ragwort	*Packera plattensis*	--	SPCO (S1)
Roundleaf serviceberry	*Amelanchier sanguinea*	--	T (S2)
Roundleaf water-cress	*Cardamine rotundifolia*	--	SPCO (S2S3)
Sedge	*Carex comosa*	--	T (S2)
Sharp's homaliadelphus	*Homaliadelphus sharpii*	--	E (S1)
Sharp's lejeunea	*Lejeunea sharpii*	--	E (S1S2)
Southern nodding tillium	*Trillium rugelii*	--	E (S2)
Spreading false-foxglove	*Aureolaria patula*	--	SPCO (S3)
Spreading rockcress	*Arabis patens*	--	E (S1)
Sweet pinesap	*Monotropsis odorata*	--	T (S2)
Sweetscent ladies'-tresses	*Spiranthes odorata*	--	E (S1)
Tall larkspur	*Delphinium exaltatum*	--	E (S2)
Tennessee pondweed	*Potamogeton tennesseensis*	--	T (S2)
Thread-leaved gerardia	*Agalinis setacea*	--	SPCO (SH)
Torrey's mountain mint	*Pycnanthemum torrei*	--	SPCO (S1)
Virginia chainfern	*Woodwardia virginica*	--	SPCO (S2)
Virginia spiraea	*Spiraea virginiana*	LT	E (S2)
Western false gromwell	*Onosmodium molle* ssp. *occidentale*	--	T (S1S2)
Yellow water-crowfoot	*Ranunculus flabellaris*	--	T (S2)

[1]**Federal status abbreviations**: LE = Listed endangered, LT = Listed threatened; PS = Partial status; C = Candidate; DM = Recovered, delisted, and being monitored

State status abbreviations: E = Endangered; T = Threatened; D = In need of management; NOST = No status; SPCO= Special concern; TRKD = Tracked by state natural heritage program; S-CE = Special concern - Commercially exploited

State rank abbreviations: S1 = Critically imperiled, often with five or fewer occurrences, S2 =Imperiled, often with <20 occurrences; S3 = Rare or uncommon, often with <80 occurrences; S4 = Widespread, abundant, and apparently secure within the state, but with cause for long-term concern; SH= Of historical occurrence in Tennessee, e.g. formally part of the established biota, with the expectation that it may be rediscovered; SX = Believed to be extirpated from the state; S#S# = Denotes a range of ranks because the exact rarity of the element is uncertain (e.g., S1S2); S#B = Breeds in Tennessee; S#N = Occurs in Tennessee in a non-breeding status

Source: TVA 2016a

In order to determine which of the species listed in each county are known to occur in the general vicinity of the reservoir, a more refined database search was conducted. Database searches are based on the following criteria: (1) distance, (2) element occurrence rank values, and (3) species or type of element present. Accordingly, plants are assessed within a 5-mile radius, aquatic species within a 10-mile radius, and terrestrial species within a 3-mile radius.

For information on threatened and endangered species and the potential impacts of the draft RLMP, see Volume I, Section 3.7.

2.2.5.1 Plants

Reviews of the TVA Natural Heritage database indicated there are no threatened or endangered plant species known to occur within the TVA parcels of Fort Loudoun Reservoir. Within the surrounding counties, the only federally listed species is Virginia spiraea, which is also listed by the State of Tennessee as endangered. Virginia spiraea is not known to occur within 5 miles of Fort Loudoun Reservoir. Additionally, there are 34 state-listed threatened or endangered species and 22 additional species listed as species of concern. Of these plants, 17 exist within 5 miles of the reservoir. These species and their habitat requirements are identified in Table 2-9.

Table 2-9. Habitat Requirements for Plant Species of Conservation Concern within 5 Miles of Fort Loudoun Reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
American funaria moss	On soil in grassy calcareous habitat[5]	Likely, however records are historic
American ginseng	Rich moist hardwood dominated woods under a closed canopy[5]	Yes, known in woods adjacent to reservoir
Bitter cress	Seepages and streambanks[5]	Likely, however records are historic.
Budding tortula	Grows on bark of elm, maple, oak, and walnut species[5]	Likely, however records are historic
Hairy false gromwell	Well drained open areas including fallow fields and pastures[5]	Likely, knows to occur on a Wildlife Management Area
Liverwort (*Radula volute*)	Damp shaded rocks along streams. 1772-3609 feet elevation[5]	Unlikely, elevation of project area too low and records are historic.
Marsh pea	Wet meadows and marshes[2]	Likely, identified along Turkey Creek
Mountain honeysuckle	Woodland edges, thickets, open woodlands[2]	Likely, along Tennessee river south of reservoir
Naked-stem sunflower	Open areas with sandy soil[4]	Likely, known to occur in glades adjacent to reservoir
Prairie ragwort	Open riverbanks, barrens[3]	Likely, however records are historic, population may have been impacted by impoundment
Sharp's homaliadelphus	Moss. Vertical surface of calcareous or dolomite bluffs[5]	Likely, however records are historic.
Spreading false-foxglove	Limestone bluffs shaded by oaks. Oak root parasite[5]	Likely, known to occur on bluffs surrounding the reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
Spreading rockcress	Moist woods, limestone outcrops, shaded riverbanks[5]	Likely, however records are historic.
Sweet pinesap	Mixed hardwood or evergreen forests[1]	Possible, records historic, presumed extirpated.
Sweetscent ladies' tresses	Swamps, marshes, prairies, riverbanks, ditches[1]	Likely, recorded near Turkey Creek
Torrey's mountain mint	Rich woods on rock, along roadsides, in thickets near streams. Usually on rocky soil[5]	Yes, known from Turkey Creek. Record isolated and historic
Western false gromwell	Glades[3]	Yes, near north end or reservoir

[1] Source: Flora of North America 1993
[2] Source: Lady Bird Johnson Wildflower Center 2013
[3] Source: TDEC 2014
[4] Source: Hilty 2015
[5] Source: NatureServe 2016

2.2.5.2 Terrestrial Wildlife

Reviews of the TVA Natural Heritage database indicate that there are four federally listed threatened or endangered terrestrial species, four species that have a partial listing in parts of their range, one candidate species, and one deemed in need of management. In addition, there are eight state-listed threatened or endangered species in the counties surrounding Fort Loudoun Reservoir including those also listed federally (see Table 2-8). There are a total of 18 species deemed in need of management and five species being tracked by the Natural Heritage Program. There are records of 14 of these listed species within 3 miles of the reservoir. These species and their habitat requirements are described in Table 2-10. One species has been documented on a TVA parcel.

Table 2-10. Habitat Requirements for Wildlife Species of Conservation Concern within the 3 Miles of Fort Loudoun Reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
Amphibians		
Berry Cave salamander	Aquatic, cave obligate, only known from four locations in the world[1]	Unlikely
Tennessee cave salamander	Aquatic, cave obligate[1]	Potential in caves on TVA parcels
Hellbender	Creeks and rivers[1]	Likely, Several records from downstream of Tellico Dam, one record near Ten Mile Creek and one historic record from within the reservoir
Birds		
Least bittern	Wetlands[1]	Likely
Virginia rail	Wetlands[1]	Likely

Common Name	Habitat Requirements	Suitable Habitat Present
Common barn-owl	Nesting: cliffs, hollow trees, buildings, open forests Foraging: dense grass fields including marshes[1]	Likely Three recorded nests in the 1970s outside of project area
King rail	Wetlands[1]	Likely
Sharp-shinned hawk	Forested areas[1]. Uncommonly nests in Tennessee, more frequently seen during migration[2]	Likely, one recorded nest in 1980 outside of project area
Peregrine falcon	Nesting: Ledges and opening of cliffs, bluffs, buildings, and occasionally trees. Foraging: Variety of open habitats including wetlands, fields, and lakeshores	Likely, one historical record from the bluffs along the Tennessee River. One 2015 record from TVA Towers in Knoxville Tennessee
Bald eagle	Forested areas near open water[1]. In Tennessee, overwintering on reservoirs and large rivers[2]	Yes, on Zone 7 parcel and within 660 feet of Zone 6 parcel. Known from multiple locations around the reservoir. One nest that has been active from 2005-2009 and one active since 2007
Mammals		
Southeastern shrew	Various habitats, appears to prefer moist-wet areas[1]	Likely, however nearby records are historic
Gray bat	Caves[1]	Likely. Six records of gray bats in the vicinity
Indiana bat	Caves and mature forests[1]	Likely
Northern long-eared bat	Caves and mature forests[1]	Likely

[1] Source: NatureServe 2016
[2] Source: Tennessee Wildlife Resources Agency (TWRA) 2016

2.2.5.2.1 Amphibians

Both the Berry Cave salamander and the Tennessee cave salamander have been observed within 3 miles of Fort Loudoun Reservoir. There are 105 caves within 3 miles of Fort Loudoun Reservoir, four of which are known to provide habitat for salamander species. Two caves are on TVA parcels and two more are within 150 feet of TVA parcels. These caves are not known to support the Berry Cave salamander or the Tennessee cave salamander.

The hellbender's habitat consists of streams and rivers. There are several records within three miles of the reservoir with the majority occurring downstream of Tellico Dam, and most of which are historical records. This species is no longer thought to occur in the main stem of the reservoir since the creation of Loudon and Tellico dams. No known occurrences have been recorded within TVA parcels; however, tributaries of the reservoir including creeks and streams have some potential to have habitat that would support this species.

2.2.5.2.2 Birds

The three wetland species, least bittern, Virginia rail, and the king rail, have all been observed in Acola marsh near the reservoir. There are no TVA-recorded observances of these species within the reservoir or within the parcels. However, due to the abundance of wetlands, there is the potential for suitable habitat within the project area.

Three occurrences of barn owl nests have been recorded within the vicinity of the reservoir. There have been no recorded occurrences of barn owls within the reservoir or TVA parcels. Due to the abundance of forests and hay/pasture land cover, there is likely suitable habitat for the barn owl within the reservoir.

Bald eagles have been observed foraging over Loudon Reservoir and documented nesting in larger trees along the reservoir. One bald eagle nest occurs on a TVA parcel that would be allocated to Zone 7 (Shoreline Access); the nest was active from at least 2005-2009. Another nest that has been active since 2007 occurs within 660 feet of a parcel that would be allocated to Zone 6 (Developed Recreation).

Peregrine falcons have been recorded nesting in bluffs along the Tennessee River as well as in urban areas near the reservoir. Nesting and foraging habitat is known to occur along the reservoir; however, no nests have been recorded in TVA parcels.

2.2.5.2.3 Mammals

Habitat that may support the southeastern shrew is present within the reservoir. However, records of this species around the reservoir have not been documented since1961. Field surveys would be required to determine if the species is still present. Due to the presence of suitable habitat, it is possible that this species may be found on TVA parcels within Fort Loudoun Reservoir.

The gray bat is known to occur in the vicinity of the reservoir. There are 105 caves within the 3-mile radius of the reservoir (see Table 2-8). Two caves are located on TVA parcels, one of which is allocated to Zone 3 (Sensitive Resource Management), and the other is allocated to Zone 6 (Developed Shoreline Recreation). Neither of these caves are known hibernacula for gray bats. However, one cave with historical records of gray bat occurs roughly 135 feet from a TVA parcel zoned 6. Heavy human disturbance likely caused the bats to abandon this cave. . Surveys of the caves on TVA property would be needed in order to determine if gray bats are using these caves. Due to the abundance of caves, it is likely that gray bats would be observed foraging over and around the project area.

No records of Indiana bats and northern long-eared bats have been documented along the Ft. Loudoun Reservoir. However, no surveys are known to have occurred along this reservoir to try to document these species. Roost trees and mist net captures of both species are known from Nantahala and Cherokee National Forests in Blount and Monroe counties. Mist net surveys have documented both species in northeastern Knox County, Anderson County and Roane County. The closest hibernaculum for either species occurs in Roane and Blount counties. Due to the presence of caves around the reservoir, and documented summer captures in nearby counties, presence of this species along the reservoir is possible. .

2.2.5.3 Aquatic Species

In the counties surrounding Fort Loudoun Reservoir, 37 state-listed species, 21 of which are also federally listed species (see Table 2-8). Within 10 miles of the reservoir, there are 23 federally listed species and 18 additional state-listed species (Table 2-11). There are no records of any listed species on TVA parcels, however there are records of 12 listed species within the reservoir.

Table 2-11. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Fort Loudoun Reservoir

Common Name	Habitat Requirement	Suitable Habitat Present
Fish		
Ashy darter	Medium rivers, slow moving pools with gravel substrates[1]	Likely
Blotched chub	Shallow water of medium streams to small rivers with gravel, rubble, or bedrock substrate[1]	Somewhat likely
Blotchside logperch	Riffles and gravel runs of clear, small to medium rivers[1]	Somewhat likely
Blue sucker*	Large rivers and tributaries. Found in channels and flowing pools. Located in some impoundments[1]	Yes
Flame chub	Springs and spring fed streams[1]	Unlikely
Highfin carpsucker*	Pools and backwaters of creeks and rivers with gravel or sandy bottoms[1]	Yes
Lake sturgeon	Bottoms of large clean freshwater rivers and lakes[1]	Likely
Longhead darter	Boulder and cobble strewn flowing pools of large creeks and small to medium rivers[1]	Somewhat likely
Marbled darter	Rocky pools and runs of small to medium rivers[1]	Somewhat likely
Snail darter	Medium sized rivers in gravel and sandy runs[1]	Somewhat likely

Common Name	Habitat Requirement	Suitable Habitat Present
Tangerine darter	Deep riffles and runs with large rubble in headwater tributaries[1]	Unlikely
Tennessee dace	Pools of spring fed headwaters[1]	Unlikely
Wounded darter	Fast rocky riffles of small to medium rivers[1]	Somewhat likely
Yellowfin madtom*	Slow pools of medium to large creeks and small rivers that are relatively unsilted[1]	Somewhat likely, record states possibly misidentified
Gastropod		
Anthony's river snail*	Cobble rubble substrate of large rivers[1]	Likely
Ornate rocksnail*	Large rivers, does not readily adapt to reservoirs[1]	Unlikely, record historic
Spiny riversnail*	Shallow shoals with a fast current[1]	Likely, record possibly historic
Mussel		
Birdwing pearlymussel	Small to medium rivers in riffles with sand/gravel substrate and moderate to fast current[1]	Somewhat likely
Cracking pearlymussel	Creeks to large rivers. In fast current it is found in sand/grave/cobble substrate. In slow current, mud/sand substrates[1]	Somewhat likely
Cumberland moccasinshell	Small streams and headwaters in sand/gravel substrate[1]	Unlikely
Cumberland monkeyface*	Riffle and shoal areas of Headwater streams and bid rivers. Requires clean fast flowing water[1]	Unlikely extirpated from Holston River system
Dromedary pearlymussel*	Riffles at sand and gravel shoals of moderate current rivers. In Tennessee, it is also found in deeper slower moving water[1]	Unlikely historic records
Fanshell	Medium to large streams, sometimes found in rivers with gravel substrate and strong current[1]	Somewhat likely
Fine-rayed pigtoe*	High gradient clear streams with firm cobble/gravel substrate[1]	Unlikely historic records
Green blossom pearlymussel	Fast flowing riffles or shoals with firm substrate[1]	Somewhat likely
Orange-foot pimpleback*	Riffles and shoals in medium to large rivers[1]	Historic records
Oyster mussel	Sand/Gravel substrates in swift currents of large creeks and rivers. Sometimes associated with *Justica americana* beds[1]	Likely
Pink mucket	Large river species associated with swift currents. May be able to reproduce in impoundments with flowing water[1]	Somewhat likely
Rainbow	Riffles along emergent vegetation beds	Somewhat likely

Common Name	Habitat Requirement	Suitable Habitat Present
	in moderate to strong current. Small to medium rivers, occasionally in lakes[1]	
Ring pink	Gravel and sandbars of large rivers[1]	Likely
Rough pigtoe	Medium to large rivers in sand/gravel/cobble shoals. Occasionally found in flats and muddy sand[1]	Likely
Sheepnose	Generally found in deep water mud/sand/gravel bottoms in large rivers with swift currents. Know to occur in upper Chickamauga reservoir below Watts Bar Dam[1]	Somewhat likely
Shiny pigtoe pearlymussel*	Shoals and riffles of small to medium rivers. Does not tolerate deep water or reservoirs[1]	Unlikely, historic records collection dates unknown
Smooth rabbitsfoot	Small to medium rivers with moderate to swift current[1]	Somewhat likely
Spectaclecase	In sheltered areas of large rivers[1]	Likely
Tan riffleshell	Headwaters. Riffle sand shoals in gravel substrate[1]	Unlikely
Tennessee clubshell	Creeks and rivers in shallow riffles and shoals composed of gravel or sand. Occasionally found in deep water habitat south or Watts Bar Dam[1]	Somewhat likely
Tennessee pigtoe	Riffle sand shoals over rocky substrate in shallow water of creeks and rivers[1]	Somewhat likely
Tuberculed blossom pearlymussel*	Shallow riffles and shoals with sand/gravel substrate in creeks and medium rivers[1]	Unlikely, considered extinct in 1998
Turgid blossom pearlymussel	Clear unpolluted water of fast flowing streams[1]	Unlikely
Wavy-rayed lampmussel	Small to medium streams and rivers in riffles over rocky substrate[1]	Somewhat likely

[1] Source: NatureServe 2016

* Records within reservoir

2.2.6 Water Quality

TVA has improved tailwater water quality below many of its hydroelectric facilities. This has been accomplished by the establishment of the Reservoir Releases Improvement Program, which was begun officially in 1991 when the TVA Board approved a five-year plan to improve water releases from 16 dams by maintaining minimum flows and reaeration of dam discharges. Implementing minimum flows was accomplished via turbine pulses, and dissolved oxygen levels increased in a variety of ways (e.g., turbine venting, oxygen injection, and weir dams) (Higgins

and Brock 1999). These techniques helped to mimic more natural riverine conditions in TVA tailwaters.

Fort Loudoun Reservoir is a main stem storage reservoir with power generation, flood control, and navigation purposes. The Reservoir Releases Improvement Program included oxygen injection at the Fort Loudoun Reservoir to help meet the dissolved oxygen target concentration. The basic system consists of an oxygen supply facility and diffuser system for transferring the oxygen to the turbine intake water. As a result, the dissolved oxygen increased approximately 1 milligram per liter (Higgins and Brock 1999).

The Fort Loudoun Reservoir hydraulic residence time is 10 days and the mean depth is 24.9 feet. The most recent ratings for dissolved oxygen, chlorophyll, and sediment for Fort Loudoun Reservoir from TVA's Reservoir Ecological Health Ratings program are presented in Table 2-12.

High chlorophyll concentrations resulting in a poor rating have been a consistent issue on Fort Loudoun. Sediment quality has been rated fair at both the forebay and mid-reservoir locations because chlordane, polychlorinated biphenyls (PCBs) and/or zinc concentrations have been found to exceed suggested limits.

Table 2-12. Ecological Health Indicators at Fort Loudoun Reservoir – 2011

Monitoring Location	Dissolved Oxygen	Chlorophyll	Sediment
Forebay	Fair	Poor	Fair
Mid-reservoir	Good	Poor	Fair

Source: TVA 2016b

There are two approved total maximum daily loads (TMDLs) for Fort Loudoun Reservoir, one for siltation and habitat alteration and one for PCBs. Six other TMDLs have been developed for watershed streams addressing fecal coliform (First, Second, Third, Goose, Baker, Williams, and Fourth creeks), pathogens (Little River, Floyd and Cloyd creeks), PCBs (Little River), and pH (Great Smoky Mountains National Park) (TDEC 2016).

While water supply intakes and waste water discharges are regulated by the states under the National Pollutant Discharge Elimination System, TVA permits the actual intake and outfall structures under Section 26a of the TVA Act. The most recent state permit/water withdrawal registration data for water supply withdrawals and waste water discharges directly from or to the

reservoirs is provided in Table 2-13. This information does not include withdrawals or discharges in the watersheds.

Table 2-13. Direct Reservoir Average Daily Water Supply Withdrawals and Wastewater Discharges – 2016

2010 Water Withdrawal Volume (MGD)			2010 Wastewater Discharge Volume (MGD)		
Municipal	**Industrial**	**Thermo-electric**	**Municipal**	**Industrial**	**Thermo-electric**
52.66	0	0	50.07	0.02	0

Source: Pers. Comm., Gary Springston, TVA, August 2016

2.2.7 Wetlands

Wetlands are transitional ecosystems between terrestrial and aquatic communities, where saturation with water is the dominant factor in determining the types of plants and animals present. Wetlands are ecologically important because of their beneficial effect on water quality, their moderation of flow regimes by retaining and gradually releasing water, their value as wildlife habitat, and as areas of botanical diversity. Wetlands exist within and adjacent to TVA reservoirs and are influenced by surface water and groundwater connections to the water levels in these reservoirs. The presence of wetlands immediately on or adjacent to TVA reservoirs is related to the land use characteristics and development status of the shoreline. Lands supporting more intense shoreline development are typically noted as having a decrease in wetland features.

Emergent wetlands typically occur in a narrow elevation zone centered on the summer pool elevation and contain water for much of the growing season. Vegetation typically includes cattail, bulrush, arrowhead, and water plantain. Scrub-shrub wetlands are typically associated with reservoir shorelines and coves and are often transition zones between emergent and forested wetlands. The vegetation can include hardwood trees less than 15 feet tall, but are dominated by shrubs such as silky dogwood, red osier dogwood, buttonbush, alder, willow, and elderberry. Forested wetlands occur on lower-lying, undisturbed areas and along tributary streams on power generation sites. These areas are dominated by flood tolerant hardwood species such as oaks, maples, and ash.

Vegetated wetlands occur with greater frequency and size along the mainstem reservoirs and tailwaters, such as Fort Loudoun, than along the tributary reservoirs and tailwaters. This is due in part to the larger-sized watersheds of main stem reservoirs resulting in a greater volume of water; greater predictability of the annual hydrologic regime; shoreline and drawdown zone

topography (wider and flatter floodplains, riparian zones, and drawdown zones and large areas of shallow water); and larger sections of relatively still, shallow-water areas. Wetlands tend to be smaller and do not occur as frequently on tributary reservoirs because of the relatively steep drawdown zones, the rolling to steep topography of adjacent lands, shoreline disturbance caused by wave action, and the lower predictability and shorter duration of summer pool levels. Within main stem reservoirs, wetlands occur on flats between summer and winter pool elevations, on islands, along reservoir shorelines, in dewatering areas, in floodplains, on river terraces, along connecting rivers and streams, around springs and seeps, in natural depressions, in areas dammed by beaver, in and around constructed reservoirs and ponds (diked and/or excavated), and in additional areas that are isolated from other surface waters.

The information presented in this document is derived from the National Wetland Inventory database and supplemented with previous on-the-ground surveys done by TVA, including for the SMI EIS (TVA 1999). Field surveys were not performed for this RLMP to gather more up-to-date information regarding the types and locations of wetlands within the Fort Loudoun Reservoir. The only types of wetlands mapped within the Fort Loudoun Reservoir besides open water are emergent and forested (Table 2-14).

Table 2-14. Wetland Types within the Fort Loudoun Reservoir

Wetland Type	Acres
Emergent	1.7
Forested	4.6
Open Water	117.5
Total	**123.8**

Source: USFWS 2016

Some of the wetland areas within the reservoir are present in local, state, and federally managed areas including wildlife refuges, wildlife management areas, national forests, parks, and recreation areas and also TVA-designated sites, including small wild areas, habitat protection areas, and ecological study areas (Subsection 2.2.11).

2.2.8 Floodplains

The area encompassed by the RLMP extends from the lower limit of TVA's property, just below the Fort Loudoun Dam at approximate TRM 601.3, upstream to about French Broad River Mile 3.8 and Holston River Mile 3.1. Fort Loudoun Dam is located at TRM 602.3. The 100-year floodplain is the area that would be inundated by the 100-year flood (base flood).

While flood storage volume is not equivalent to floodplain area, it does reflect the overall benefit and value of each reservoir in providing flood abatement. The flood storage volume at Fort Loudoun Reservoir is 111,000 acre-feet (Volume 1, Table 3-1).

In Fort Loudoun Reservoir, the 100-year flood elevations for the Tennessee River vary from 816.0 feet msl at the Fort Loudoun Dam at TRM 602.3 to elevation 825.4 feet msl at TRM 652.02. The 500-year flood elevations vary from 817.0 feet msl at TRM 602.3 to 832.4 feet msl at TRM 652.02. On the French Broad River, 100- and 500-year flood elevations vary from 825.4 and 832.4 feet at the mouth to 829.7 and 838.0 feet at the upstream limit of TVA land rights at about Mile 3.8, respectively. On the Holston River, 100- and 500-year flood elevations vary from 825.4 and 832.4 at the mouth to 829.0 and 835.6 feet at the upstream limit of TVA land rights at about Mile 3.1, respectively.

Tabulations of the 100- and 500-year flood elevations are included in Volume I, Appendix D.

2.2.9 Air Quality

In accordance with the Clean Air Act Amendments of 1990, all counties that include parts of the Fort Loudoun Reservoir are designated with respect to compliance, or degree of noncompliance, with the National Ambient Air Quality Standards (NAAQS). The NAAQS have been established to protect the public health and welfare with respect to six pollutants: particulate matter, sulfur dioxide, carbon monoxide, ozone, nitrogen dioxide, and lead. An area with air quality better than the NAAQS is designated as “attainment;” an area with air quality worse than the NAAQS is designated as “non-attainment.” Blount, Knox and Loudon counties are considered in moderate nonattainment for Particulate Matter with particles less than 2.5 micrometers in aerodynamic diameter ($PM_{2.5}$) (2012 annual standards). Tennessee is expected to submit a re-designation request in the fall of October 2016 for these counties to be considered in attainment for all NAAQS. Near the Fort Loudoun Reservoir, the Great Smoky Mountains (approximately 9 miles away), Joyce Kilmer-Slickrock Wilderness (approximately 21 miles away) and the Linville Gorge Wilderness Area (approximately 105 miles away) are designated Prevention of Significant Deterioration Class I air quality areas and are afforded special protection. General information about air emissions and climate change are identified in Volume I.

Sources of air emissions within lands along the Fort Loudoun Reservoir include industrial development, public works projects, developed recreation sites, motorized watercraft (motor boats, jet skis), and other vehicle traffic. Lands that would be allocated to Zone 5 (Industrial) have the greatest potential to support uses that produce higher levels of air emissions. Major

sources of air emissions within Zone 5 include industrial and light manufacturing facilities, barges, trucks and personal vehicles, and barge terminals and operations.

Air emissions generated within Fort Loudoun Reservoir vary with type of activity/development. Currently, air emissions from uses on TVA lands on the Fort Loudoun Reservoir are low. Future projects that have the potential to affect ambient air quality would be planned in detail to minimize air emission impacts and would comply with Clean Air Act regulations.

For information on air quality and the potential impacts of the draft RLMP, see Volume I, Section 3.11.

2.2.10 Cultural and Historic Resources

Cultural resources include prehistoric and historic archaeological sites, districts, buildings, structures, and objects, as well as locations of important historic events that lack material evidence of those events. Cultural resources that are listed, or considered eligible for listing, on the National Register of Historic Places (NRHP) are called historic properties. To be considered an historic property, a cultural resource must possess both integrity and significance. A historic property's integrity is based on its location, design, setting, materials, workmanship, feeling, and association. The significance is established when historic properties meet at least one of the following criteria: (a) are associated with important historical events or are associated with the lives of significant historic persons; (b) embody distinctive characteristics of a type, period, or method of construction; (c) represent the work of a master, or have high artistic value; or (d) have yielded or may yield information important in history or prehistory (36 Code of Federal Regulations [CFR] Part 60.4).

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effects of their proposed undertakings on historic properties and provide the Advisory Council on Historic Preservation an opportunity to comment on those effects. TVA determined that the proposed Action Alternative is an "undertaking" as defined by the regulations under NHPA. Once an action is determined to be an undertaking, the regulations require agencies to consider whether the proposed activity has the potential to impact historic properties. If the undertaking is such an activity, then the agency must follow the following steps: (1) involve the appropriate consulting parties; (2) define the area of potential effects (APE); (3) identify historic properties in the APE; (4) evaluate possible effects of the undertaking on historic properties in the APE; and (5) resolve adverse effects (36 CFR § 800.4 through 800.13). An APE is defined as the "geographic area or areas within which the undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such

properties exist" (36 CFR § 800.16). Concerning cultural resources, the APE is taken as the affected environment for purposes of this EIS. TVA defined the APE to be the approximately 159.3-acre area where TVA is proposing in its draft RLMP (Alternative B) to change the current Zone allocations (Alternative A).

Section 106 of the NHPA requires federal agencies to consult with the respective State Historic Preservation Officer (SHPO) and Indian tribes when proposed federal actions could affect historic and cultural resources, including archaeological resources, which are also protected under the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act, in addition to the NHPA.

2.2.10.1 Archaeological Resources

The Fort Loudoun Reservoir region has been an area of human occupation for the last 12,000 years. This includes five broad cultural periods: Paleo-Indian (>12,000-8,000 BC), Archaic (8,000-1,600 BC), Woodland (1,600 BC-AD 1,000), Mississippian (AD 1,000-1,700), and Historic (AD 1,700-present). These divisions are based on stylistic changes in artifact types and technological and cultural adaptations. Prehistoric land use and settlement patterns vary during each period, but short- and long-term habitation sites are generally located on flood plains and alluvial terraces along rivers and tributaries. Specialized campsites tend to be located on older alluvial terraces and in the uplands. During the later Protohistoric/Historic period (sixteenth century) the area contained the towns and smaller settlements of the Overhill Cherokee (Schroedl 2009). The influx of European settlers into this region led to conflict with the Cherokee and the eventual ceding of Cherokee land to the United States under the Treaty of 1819. Both Knox and Blount Counties were founded in the 1790's and Loudon County was founded in 1870. The early economies of these counties were largely based on agriculture with later economic growth accelerating with the establishment of railroad transportation. The Civil War destroyed some of this early infrastructure and commercial development. Post-Civil War economic development was comparatively slow, but industrialization eventually spread through the counties. In addition to agricultural and industrial development, the creation of the TVA, the Great Smoky Mountains National Park, and educational institutions have significantly contributed to the development of these counties.

The earliest formal archaeological investigations in the region began long prior to the impoundment of Fort Loudoun Reservoir and were undertaken by Clarence B. Moore (1915) and Mark R. Harrington (1922). These early investigations were primarily concerned with prehistoric monumental architecture, caves, and large shell midden sites. Unlike other Works

Project Administration-era dam projects, the land to be impounded by Fort Loudoun Reservoir was not subjected to archaeological investigations prior to inundation. Much of what we know about the prehistoric cultures along Fort Loudoun Reservoir originate from the extensive excavations performed for the Tellico Reservoir Project which is also located in Blount County (Chapman 1985, Davis 1990, Kimball 1985). In recent decades, TVA land has been subjected to archaeological investigations in response to potential project impacts. The largest of these archaeological investigations focused on identifying all archaeological sites along an 11.8 mile section of shoreline (Gage 2005) and a 14 mile section of Fort Loudoun Reservoir shoreline (Ahlman et al. 2000). Oher past archaeological surveys of Fort Loudoun Reservoir lands have varied in location and thoroughness due to evolving archaeological site identification standards. Not all of the lands involved in this land planning process have been surveyed. Moreover, many of the previously reported archaeological sites have not been assessed for their NRHP eligibility. Of the 159 acres of lands that TVA proposes to change land use allocations under the proposed RLMP (Alternative B), these limited archaeological surveys resulted in the identification of 13 archaeological sites.

2.2.10.2 Historic Structures

The acquisition of land for Fort Loudoun Reservoir resulted in the removal of many structures and other man-made features. The few structures that remain represent all historical periods including individual farmsteads or larger scale plantations, civic or religious sites such as churches, cemeteries or schools, and industrial sites such as mills. In addition, structures associated with the inception of TVA may have historic significance such as the Fort Loudoun Hydroelectric Project. TVA is currently in the process of nominating Fort Loudoun Dam and its associated facilities to the NRHP.

The presence of other historic structures on Fort Loudoun Reservoir cannot be ruled out until a historic structure inventory has been conducted as part of a project-specific environmental review (all projects that would occur on TVA land receive such a review as part of the NEPA and Section 106 processes). Furthermore, many historic structures remain on adjacent non-TVA land that may be indirectly impacted by activities on TVA land.

2.2.11 Natural Areas and Ecologically Significant Sites

Natural areas include managed areas, ecologically significant sites, and Nationwide Rivers Inventory (NRI) streams. Managed areas include lands held in public ownership that are managed by an entity (e.g., TVA, State of Tennessee, Loudon and Knox counties) to protect and maintain certain ecological and/or recreational features. A management plan or similar

document defines what types of activities are compatible with the intended use of the managed area. Ecologically significant sites are tracts of privately owned land either that are recognized by resource biologists as having significant environmental resources or identified tracts on TVA lands that are ecologically significant, but not specifically managed by TVA's Natural Areas Program. NRI streams are free-flowing segments of rivers recognized by the National Park Service as possessing outstanding natural or cultural values that may potentially qualify them as part of the National Wild and Scenic Rivers System.

The TVA Natural Heritage database indicates that there are 23 natural areas on or within TVA parcels along Fort Loudoun Reservoir. An additional 23 natural areas lie within 3 miles of Fort Loudoun Reservoir. The natural areas along Fort Loudoun Reservoir primarily include local and state parks. For more information on managed areas and sensitive ecological sites, see Volume I, Section 3.13 and Appendix D.

2.2.12 Aesthetics and Visual Resources

Fort Loudoun's visual resources are not unusually unique on a state, regional, or national level. The upper riverine portions are separated from backlying farmlands by strips of trees and miles of high clay banks that are continually being eroded by wave action. Occasionally, these shorelines are interrupted by creek embayments with dense aquatic plant growth, presenting a low marsh like character to the landscape. Downstream, the river portions of the reservoir become broadened by numerous emergent wetland embayments, providing a scenic middle ground to divide the lake user from the mainland.

The area surrounding the reservoir is primarily rural. The shoreline of the reservoir is comprised of a variety of land uses including forested areas, residential development, recreational areas, farmed areas and a relatively small amount of industrial and commercial uses primarily located in the vicinity of the larger cities. Near the dam, human-made structures along the reservoir are generally harmonious with the surrounding view. The boat docks are organized and low in stature, allowing the trees across the reservoir to be seen. Many boat houses and parking lots are also partially hidden in trees or behind grassy swales, reducing the impact of these structures on the surrounding landscape. Overall, this area is attractive, but constitutes more of an intrusion into a scenic environment than an area where one would travel to in order to experience an appealing view.

2.2.13 Noise

Sources of noise within lands along the Fort Loudoun Reservoir include that associated with industrial development, developed recreation sites, and project operations. Characteristics of noise emissions associated with common land uses are identified in Volume I of the EIS.

Lands that TVA proposes to allocate to Zone 5 (Industrial) have the greatest potential to support uses that produce higher levels of noise. The most common measurement of sound and environmental noise is the A-weighted decibel scale (dBA). This is a logarithmic scale that ranges from 0 dBA to about 140 dBA and approximates the range of human hearing. Common sources of noise within Zone 5 include heavy trucks; rail and barge operations; and industrial workplaces. Noise emission levels for these sources can range from 85 decibels (dBA) to 100 dBA (USDOI 2008). Lands that would be allocated to Zone 2 (Project Operations) also have the potential to generate noise, but typically to a lesser degree than industrial development. The primary source of noise from land allocated to Zone 2 are the Fort Loudoun Dam Reservation, including the dam and powerhouse, navigation lock and associated barge operations, access roads; and boat-launching ramp. Noise emission levels for these sources can range from 70 dBA to 100 dBA (USDOI 2008). Lands allocated to Zone 6 (Developed Recreation) also have the potential to generate noise, but typically to a lesser degree than industrial development. The magnitude of the noise level depends on the location of the facilities and the type and intensity of recreational use. Common sources of noise within Zone 6 include: motorized watercraft (motor boats, jet skis); and road traffic. Noise emission levels for Zone 6 uses can range from 40 dBA (very quiet) to 90 dBA (jet ski). Noise levels for motor boats and jet skis may also exhibit short elevated bursts of noise as a result of speed of the watercraft and other operational factors.

Under the proposed RLMP (Alternative B), TVA land that would be allocated to Zone 3 (Sensitive Resource Management), Zone 4 (Natural Resource Conservation) and Zone 7 (Shoreline Access) account for the approximately 29 percent of land uses at Fort Loudoun Reservoir. Such land uses generally do not create noise emissions that would have an effect on the ambient noise environment and reflect a general environment consisting of low noise levels. Approximately 71 percent of land along the reservoir would be allocated to zones that would support land uses with the potential for noise emissions (Zones 2, 5 and 6).

Noise from land uses varies with the type of development and would attenuate with distance from the source and as such, the noise level around the reservoir is relatively low. However, because 71 percent of the TVA-managed land is either in Zones 2, 5 or 6, the noise level could

be marginally higher in certain locations depending on the type and location of the development. Any future projects on parcels that have the potential to affect noise emissions would be planned in detail and may be expected to consist of both water-dependent facilities and other common as well as new developments as allowed per each land use zone.

2.2.14 Socioeconomics

2.2.14.1 Population and Economy

The population of the Fort Loudoun Reservoir area is described in Table 2-15. Knox County, which contains the city of Knoxville, has the highest population within the three county area with 440,732 persons which represents an increase of 4.4 percent since 2010. Loudon County has the lowest estimated population in 2015, less than half the population of the second largest county, Blount County. Projected growth rates are larger in the counties with smaller total populations. None of the counties are projected to experience decline in population from 2015 to 2020. Blount County is the only county with a lower percent change or projected growth rate than the state of Tennessee in any period between 2010 and 2020.

Table 2-15. Population and Percent Growth – Fort Loudoun Reservoir

Population	County			State
	Loudon	Blount	Knox	Tennessee
Population (2020 - Projection)	58,729	136,357	481,842	7,195,375
Population (2015 - Estimate)	51,130	127,253	451,324	6,600,299
Population (2014 - Estimate)	49,749	124,435	440,732	6,451,365
Population (2010)	48,556	123,010	432,226	6,346,105
Projected Growth (2015-2020)	14.9%	7.2%	6.8%	8.3%
Percent Change (2010-2015)	5.3%	3.4%	4.4%	3.9%
Percent Change (2010-2014)	2.5%	1.2%	2.0%	1.6%
Percent Rural (2010)	40.6%	32.6%	10.9	33.6%

Sources: USCB 2015 and USCB 2010a

The counties in the Fort Loudoun Reservoir area range from 10.9 percent rural in Knox County to 40.6 percent rural in Loudon County. None of the counties within the area have a rural majority population. Both Loudon and Blount counties have significantly larger rural populations when compared to Knox County, due to the lack of a large municipality, such as Knoxville. Only Loudon County contains a greater rural population than the state of Tennessee.

As presented in Table 2-16, from 2010 to 2014, the Fort Loudoun Reservoir area had an average unemployment rate of 5 percent. The state of Tennessee during that same period had

an unemployment rate of 6 percent. None of the counties in the area had an unemployment rate greater than the state. Employment within all three counties, as well as the state was largely concentrated in two sectors: Management and Business Science, and Arts and Sales and Office. The median household incomes for the three counties were $60,062 for Loudon County, $46,518 for Blount County, and $47,543 for Knox County. Each of the counties had higher median household incomes than the state of Tennessee.

Table 2-16. Employment and Income, 2010-2014 – Fort Loudoun Reservoir

Employment and Income	County			State
	Loudon	Blount	Knox	Tennessee
Civilian Employed Population 16 Years and Over	19,811	54,795	211,194	2,835,895
Management and Business Science and Arts	31%	32%	40%	34%
Service Occupations	17%	18%	16%	17%
Sales and Office	23%	26%	27%	25%
Natural Resources, Construction, and Maintenance	11%	10%	7%	9%
Production, Transportation and Material Moving	18%	14%	10%	15%
Percent of Population > 16 years Unemployed	6%	5%	4%	6%
Median Household Income	$60,062	$46,518	$47,543	$44,621

Source: USCB 2010b

2.2.14.2 Environmental Justice

EO 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” formally requires Federal agencies to incorporate Environmental Justice as part of NEPA. Specifically, it directs them to address, as appropriate, any disproportionately high and adverse human health or environmental effects of their actions, programs, or policies on minority and low-income. Although TVA is not one of the agencies subject to this order, TVA routinely considers Environmental Justice impacts as part of the project decision-making process.

The minority population in the Fort Loudoun Reservoir area is significantly smaller than the state of Tennessee’s, ranging from 8.3 percent in Blount County to 17.1 percent in Knox County (Table 2-17). The percent of the population below the poverty level between 2010 and 2014 was 15.7 percent for Loudon County, 14.4 percent for Blount County, and 15.3 percent for Knox County. All of the counties poverty rates were less than the state of Tennessee at 17.8 percent of the population.

Table 2-17. Minority Population and Poverty, 2010-2014 – Fort Loudoun Reservoir

Minority Population and Poverty	County			State
	Loudon	Blount	Knox	Tennessee
Total Population	49,749	124,435	440,732	6,451,365
White Alone*	47,763	117,279	377,816	5,029,109
Black or African American Alone[1]	617	3,658	40,328	1,082,001
American Indian and Alaska Native Alone[1]	89	511	1,150	17,656
Asian Alone*	377	998	8,868	98,441
Native Hawaiian and Other Pacific Islander Alone[1]	23	8	140	3,256
Two or More Races	652	1,588	8,489	122,662
Hispanic or Latino[2]	3,712	3,618	16,252	309,828
Percent Minority	11%	8.3%	17.1%	25.4%
Percent of Population Below Poverty Level	15.7%	14.4%	15.3%	17.8%

[1] Includes persons reporting only one race
[2] Hispanics may be of any race, so also are included in applicable race categories.

Source: USCB 2010b

2.3 The Future Management of Reservoir Lands

Varying types of land management or conservation techniques coupled with development could occur along Fort Loudoun Reservoir. The implementation of the NRP would drive the types of programs conducted on TVA lands set aside due to natural or sensitive resources. Business opportunity, overall economy, local incentives, and community planning practices are factors that could contribute to the types of industry locating or expanding along the reservoir. Recreation demand is driven by population levels, recreation participation rates, changing preferences for different types of recreation, and innovations in recreation equipment. Lands set aside for residential shoreline access are based on the types of property rights conveyed by TVA upon sale of the property or established via TVA policy. The TVA lands managed by other federal, state, or local agencies would most likely continue to do so in a similar manner.

This page left blank intentionally

CHAPTER 3. LAND PLANNING PROCESS

3.1 Process for Planning Land

The reservoir land management planning process involves allocation of TVA fee-owned land to seven defined land use zones. The term “land use zone” refers to a descriptive set of criteria given to distinct areas of land based on location, features, and characteristics. The land use zone definitions listed in Table 3-1 are identical to those listed in the NRP. The definition of a land use zone provides a clear statement of how TVA will manage public land, and allocation of a parcel to a particular land use zone identifies that land for specific uses. Implementation of an RLMP minimizes conflicting land uses and makes it easier to handle requests for use of public land.

This draft RLMP was developed by a team of land managers and technical experts from TVA, knowledgeable about the reservoir and its resources. The planning team proposed land use allocations by integrating public needs, environmental conditions, economic benefits, state and federal policies, and the original congressional intent of the Fort Loudoun Reservoir project. The process includes information from resource data, computer analysis, the public, other agencies, and knowledgeable TVA staff. This draft RLMP is consistent with the strategic direction of the NRP and the objectives of the CVLP. Furthermore, the categorization and management of TVA-owned shoreline access land along Fort Loudoun Reservoir tiers from the SMI EIS (TVA 1998).

The planning process is completed once TVA conducts an environmental review of the draft RLMP as well as reasonable alternatives, in compliance with NEPA. This process allows the public and intergovernmental partners to review TVA’s proposed allocations and provide input.

Table 3-1. Land Use Zone Definitions

Zone	Definition
Zone 1 Non-TVA Shoreland	Shoreland that TVA does not own in fee. This land may be privately owned or owned by a governmental entity other than TVA. Uses of this non-TVA land may include residential, industrial, commercial, and/or agricultural. In many instances, TVA may have purchased the right to flood and/or limit structures on this non-TVA land (i.e., flowage easement). TVA’s permitting authority under Section 26a of the TVA Act applies to construction of structures on non-TVA shoreland. Non-TVA shoreland allocations are based on deeded rights and, therefore, will not change as a result of the lands planning process. This category is provided to assist in comprehensive evaluation of potential environmental impacts of TVA’s allocation decision.

Zone	Definition
Zone 2 Project Operations	Land currently used, or planned for future use, for TVA operations and public works projects, including: • Land adjacent to established navigation operations — Locks, lock operations and maintenance facilities, and the navigation work boat dock and bases. • Land used for TVA power projects operations — Generation facilities, switchyards, and transmission facilities and rights-of-way. • Dam reservation land — Areas acquired and managed for the primary purpose of supporting the operation and maintenance of TVA dams and associated infrastructure; secondary uses may also include developed and dispersed recreation, maintenance facilities, miscellaneous TVA field offices, research areas, and visitor centers. • Navigation safety harbors/landings — Areas used for tying off commercial barge tows and recreational boats during adverse weather conditions or equipment malfunctions. • Navigation dayboards and beacons — Areas with structures placed on the shoreline to facilitate navigation. • Public works projects — Includes rights-of-way for public utility infrastructure, such as sewer lines, water lines, transmission lines, and major highway projects.
Zone 3 Sensitive Resource Management	Land managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment. Recreational natural resource activities, such as hunting, wildlife observation, and camping on undeveloped sites, may occur in this zone, but the overriding focus is protecting and enhancing the sensitive resource the site supports. Areas included are: • TVA-designated sites with potentially significant archaeological resources. • TVA public land with sites/structures listed in or eligible for listing in the National Register of Historic Places**.** • Wetlands — Aquatic bed, emergent, forested, and scrub-shrub wetlands as defined by TVA. • TVA public land under easement, lease, or license to other agencies/individuals for resource protection purposes. • TVA public land fronting land owned by other agencies/individuals for resource protection purposes. • Habitat protection areas — These TVA natural areas are managed to protect populations of species identified as threatened or endangered by the U.S. Fish and Wildlife Service, state-listed species, and any unusual or exemplary biological communities/geological features. • Ecological study areas — These TVA natural areas are designated as suitable for ecological research and environmental education by a recognized authority or agency. They typically contain plant or animal populations of scientific interest or are of interest to an educational institution that would utilize the area.

Zone	Definition
	• Small wild areas — These TVA natural areas are managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural, scenic, or aesthetic qualities that can also support dispersed, low-impact types of outdoor recreation. River corridor with sensitive resources present — A river corridor is a segment of a river and the adjacent land along the banks. River corridors often consist of a linear green space of TVA land serving as a buffer to tributary rivers entering a reservoir. These areas will be included in Zone 3 when identified sensitive resources are present. • Significant scenic areas — Areas designated for visual protection because of their unique vistas or particularly scenic qualities. • Champion tree site — Areas designated by TVA as sites that contain the largest known individual tree of its species in that state. The state forestry agency "Champion Tree Program" designates the tree, while TVA designates the area of the sites for those located on TVA public land. • Other sensitive ecological areas — Examples of these areas include heron rookeries, uncommon plant and animal communities, and unique cave or karst formations.
Zone 4 Natural Resource Conservation	Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Areas included are: • TVA public land managed for wildlife or forest management projects. • TVA public land under easement, lease, or license to other agencies for wildlife or forest management purposes. • TVA public land fronting land owned by other agencies for wildlife or forest management purposes. • Dispersed recreation areas maintained for passive, dispersed recreation activities, such as hunting, hiking, bird watching, photography, primitive camping, bank fishing, and picnicking. • Shoreline conservation areas — Narrow riparian strips of vegetation between the water's edge and TVA's back-lying property that are managed for wildlife, water quality, or visual qualities. • Wildlife observation areas — TVA natural areas with unique concentrations of easily observed wildlife that are managed as public wildlife observation areas. • River corridor without sensitive resources known to be present — A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. River corridors will be included in Zone 4 unless sensitive resources are present (see Zone 3). • Islands where sensitive resources are not known to be present or that support existing development.

Zone	Definition
Zone 5 Industrial	Land currently used, or planned for future use, for economic development, including businesses in distribution/processing/assembly and manufacturing. Preference will be given for businesses requiring water access. There are two primary types of uses for TVA land allocated for Industrial: (1) access for water supply or structures associated with navigation such as barge terminals, mooring cells, etc., or (2) land-based development potential. Areas included are: • TVA public land under easement, lease, or license to other agencies/individuals/ entities for industrial purposes. • TVA public land fronting land owned by other agencies/individuals/entities for industrial purposes. In some cases, TVA land allocated to industrial use would be declared surplus and sold at public auction. Types of development that can occur on this land are: • Industry — Manufacturing, fabrication, and distribution/processing/assembly involving chemical, electronics, metalworking, plastics, telecommunications, transportation, and other industries. Industry does not include retail or service-based businesses. • Industrial access — Access to the waterfront by back-lying property owners across TVA property for water intakes, wastewater discharge, or conveyance of commodities (i.e., pipelines, rail, or road). Barge terminals are associated with industrial access corridors. • Barge terminal sites — Public or private facilities used for the transfer, loading, and unloading of commodities between barges and trucks, trains, storage areas, or industrial plants. • Fleeting areas — Sites used by the towing industry to switch barges between tows or barge terminals that have both offshore and onshore facilities. • Minor commercial landing — A temporary or intermittent activity that takes place without permanent improvements to the property. These sites can be used for transferring pulpwood, sand, gravel, and other natural resource commodities between barges and trucks.
Zone 6 Developed Recreation	Land currently used, or planned for future use, for concentrated, active recreational activities that require capital improvement and maintenance of developed infrastructure, including: • TVA public land developed for recreational purposes, such as campgrounds, day use areas, etc. • TVA public land under easement, lease, or license to other agencies/individuals/entities for developed recreational purposes. • TVA public land fronting land owned by other agencies/individuals/entities for developed recreational purposes. Residential use, long-term accommodations, and/or individually owned units are not permitted on land allocated for developed recreation. Types of development that can occur on this land are: • Public recreation — Recreation amenities developed and owned by a public agency that are open to the public. Public recreation areas may

Zone	Definition
	have varying levels of development, ranging from a water access site (e.g., launching ramp) to a marina facility. Facilities at public recreation areas could include playgrounds/play structures, picnic facilities, tennis courts, horseshoe areas, play courts, recreation centers, trails, greenways, natural areas, amphitheaters, food concessions (vending, snack bar), access to water for fishing and boating, swimming areas and swimming pools, launching ramps, courtesy piers, canoe access, marina facilities owned by the public entity, parking, and campgrounds. Cabins or other overnight accommodations (other than campgrounds) are only permitted if the public recreation area is operated by a state or state agency as a component of a state park system. • Public recreation areas and facilities are typically owned and operated by the federal, state, county, or local government. However, private entities may operate recreation facilities on public recreation land as concessionaires under agreement with the public entity controlling the property. The use of the facilities may be offered free or for a fee. Time-forward, public-private partnerships where facilities are owned by private investors will not be approved on public recreation land. All structures and facilities should be owned by the public entity. • Commercial recreation — Recreation amenities that are provided for a fee to the public intending to produce a profit for the private owner/operator. These primarily water-based facilities typically include marinas and affiliated support facilities such as stores, restaurants, campgrounds, and cabins and lodges. Where applicable, TVA will require appropriate compensation for the commercial use of the property.
Zone 7 Shoreline Access	TVA-owned land where Section 26a applications and other land use approvals for residential shoreline alterations are considered in accordance with TVA's Shoreline Management Policy. Types of development/management that may be permitted on this land are: • Residential water use facilities, e.g., docks, piers, launching ramps/driveways, marine railways, boathouses, enclosed storage space, and nonpotable water intakes. • Shoreline access corridors, e.g., pathways, wooden steps, walkways, or mulched paths that can include portable picnic tables and utility lines. • Shoreline stabilization, e.g., bioengineering, riprap, gabions, and retaining walls. • Shoreline vegetation management.

Prior to proposing parcel allocations, the TVA planning team reviewed the characteristics of each parcel (i.e., location and existing conditions). TVA also reviewed deeds of selected tracts previously sold to private entities to identify existing shoreline access rights. In addition, the planning team honored all existing commitments—that is, existing leases, licenses, and easements. No sensitive resources surveys were conducted on committed land. The need for field reviews for uncommitted parcels was determined based on data from the TVA Natural Heritage database. Land with identified sensitive resources was proposed to be placed in

Zone 3 (Sensitive Resource Management). The remaining parcels were proposed for allocations based on reservoir planning objectives and public input. Proposed management of each parcel was made by consensus among the TVA planning team. When developing the proposed RLMPs, the planning team identified proposed allocations and used the zone definitions listed above to reach consensus on the proposed allocations of the reservoir land.

In developing draft RLMPs, TVA proposes to allocate lands currently committed to a specific use to a zone compatible with that use unless there is an overriding need to change the use. Land currently committed to a specific use was allocated to a zone compatible with that use unless there was an overriding need to change the use. Some committed land uses are determined by the covenants and provisions of easements, leases, licenses, and sale and transfer agreements. Committed lands include the following: properties where TVA has granted land rights (easements, leases, etc.) for specific uses, properties where TVA has previously identified resources in need of protection, Project Operations lands (transmission lines, dam reservations, public infrastructure, etc.), and lands fronting wildlife management areas. Possible reasons to change a committed land use would be to prevent or remedy ongoing adverse impacts resulting from the actions of a license or easement holder.

Approximately 922.8 acres (61.0 percent) of the TVA land surrounding Fort Loudoun Reservoir are committed due to existing agreements, TVA operations, or other public infrastructure projects. Agricultural licenses are not considered as committed uses because they are an interim use of TVA land.

Approximately 590.3 acres (39.0 percent) of the TVA land surrounding Fort Loudoun Reservoir are uncommitted. Technical specialists collected existing data on many uncommitted parcels to identify areas containing known sensitive resources. Representatives from various TVA organizations met to propose how these uncommitted lands should be allocated into the seven planning zones. The location of known and potentially sensitive resources was used in determining the capability and suitability of potential uses for each parcel of land.

3.2 Fort Loudoun Reservoir Goals and Objectives

The NRP established long-term land planning goals and objectives. While these goals and objectives were established to guide planning decisions across the Valley, these same goals and objectives can be applied when planning specific reservoirs.

Goal

TVA will strive to continue to balance shoreline development, recreational use, sensitive and natural resource management, industrial use and other land uses in a way that maintains the quality of life and other important values across the region.

Objectives

Apply a systematic method of evaluating and identifying the most suitable uses of TVA public lands using resource data, stakeholder input, suitability and capability analyses, and TVA staff input.

- Identify land use zone allocations to optimize public benefit and balance competing demands for the use of public lands.
- Identify land use zone allocations to support TVA's broad regional resource development mission. TVA reservoir properties are managed to provide multiple public benefits, including recreation, conservation, and economic development.
- Provide a clear process by which TVA will respond to requests for use of TVA public land.
- Comply with federal regulations and executive orders.
- Enhance the protection of significant resources, including threatened and endangered species, cultural resources, wetlands, unique habitats, natural areas, water quality, and the visual character of the reservoir.
- Provide a mechanism that allows local, state, and federal infrastructure projects when the use is compatible with the zone allocation.

3.3 Parcel Allocations

TVA's land planning process (Section 3.1) along with the goals and objectives specific to Fort Loudoun Reservoir (Section 3.2) were used to develop this draft RLMP. Through this process, TVA proposes allocations for each reservoir parcel to one of the seven planning zones as indicated in Table 3-2.

Table 3-2. Summary of Proposed Land Use Allocations for Fort Loudoun Reservoir Land Management Plan (Alternative B)

Allocation Designation		Number of Parcels	Acres
Zone 2	Project Operations	30	477.2
Zone 3	Sensitive Resource Management	7	59.6
Zone 4	Natural Resource Conservation	23	317.4
Zone 5	Industrial	5	10.5
Zone 6	Developed Recreation	45	590.8
Zone 7	Shoreline Access	20	57.8
Total		**130**	**1,513.3**

Figure 3-1 represents the percent of land acreage on Fort Loudoun Reservoir that would be allocated to each land use zone under the draft RLMP (Alternative B of the EIS). A detailed description of each zone and the identification of the land zoned by each category is presented below.

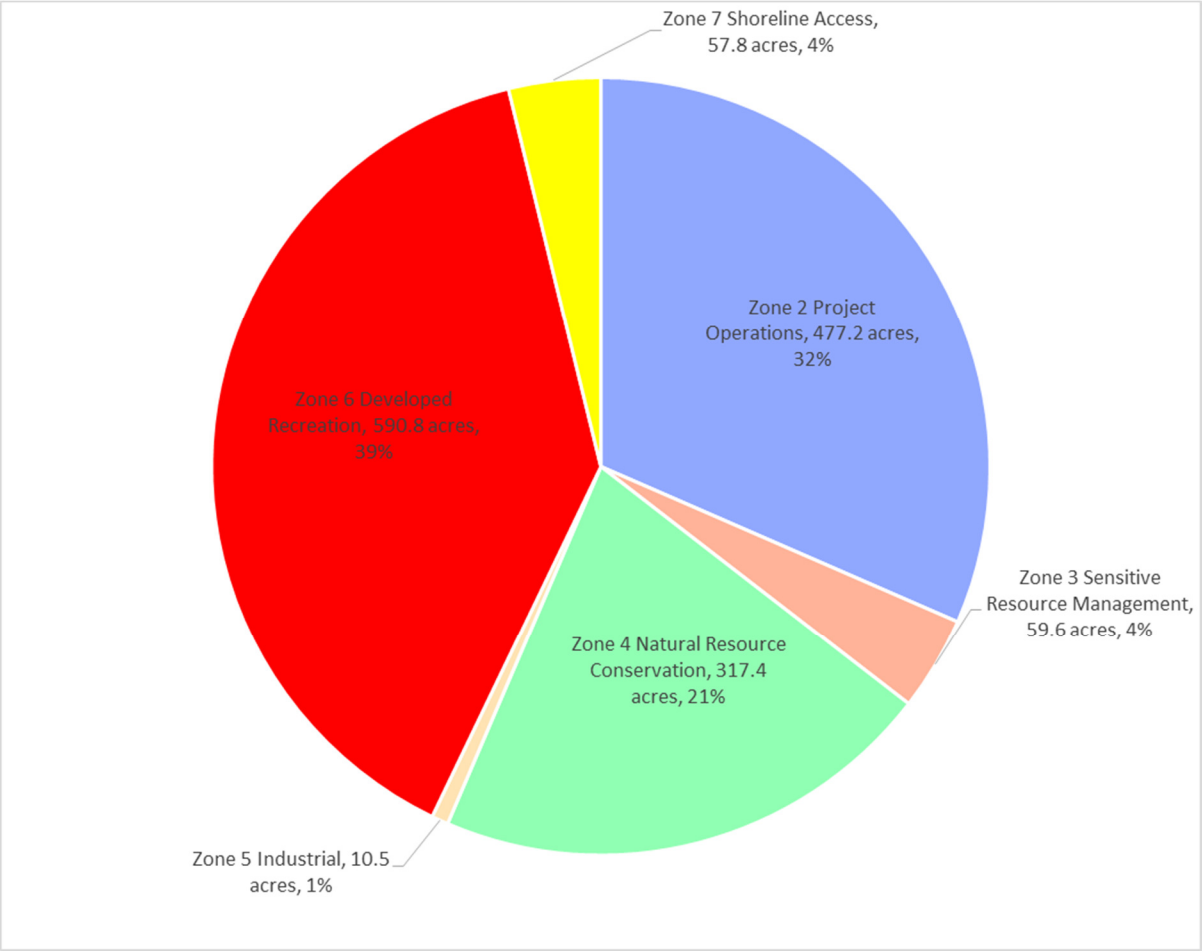


Figure 3-1. Percent of Fort Loudoun Reservoir Acreage Allocated by Zone

- Zone 2 (Project Operations). Zone 2 encompasses all TVA land currently used for TVA operations and public works projects. There are 477.2 acres (approximately 32 percent of TVA lands) allocated to Zone 2. The largest parcel allocated to Zone 2 is the Fort Loudoun Dam Reservation which contains the dam, dam powerhouse and associated access roads, transmission lines and substations; navigation lock and associated access roads and mooring cells; roads; public restrooms, shoreline fishing walkways on both river banks, and a boat-launching ramp.
- Zone 3 (Sensitive Resource Management). Zone 3 lands are managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment. Approximately 4 percent (59.6 acres) of the TVA-managed land on Fort Loudoun reservoir is allocated to Zone 3. The parcels included in this allocation represent areas where high-quality wetland habitat, wildlife habitat, scenic buffers, or cultural and historic resources are present. The largest parcel allocated to Zone 3 consists of 36.9 acres and is commonly known as Salt Peter Bluff. This area offers a scenic buffer between the back-lying Bluff Point Subdivision and Fort Loudoun Reservoir.
- Zone 4 (Natural Resource Conservation). Lands allocated to Zone 4 are managed for the enhancement of natural resources for human use and appreciation. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Approximately 21 percent of TVA land on this reservoir is allocated to Zone 4. The two largest parcels in this land use group are Parcels 10 and 112. Parcel 10 is heavily forested and is very steep and impacted by invasive exotic plants. Parcel 112 consists of an island and peninsula and the island, known as Ish Creek Island, is likely the most heavily used area on the reservoir for informal camping on TVA lands.
- Zone 5 (Industrial). Zone 5 lands are managed for economic development including businesses in distribution/processing/assembly and light manufacturing. Less than 2 percent of TVA land (10.5 acres) around this reservoir is allocated to Zone 5. Lands allocated to this zone reflect existing industrial uses.

- Zone 6 (Developed Recreation). Lands allocated to Zone 6 are currently used for or planned for recreational purposes, such as public launching ramps or parks. For example, Parcel 5 comprises 49.6 acres, includes Fort Loudoun Marina, a commercial recreation area, and Lenoir City Park, a public municipal park. The marina is managed by a private entity. Lenoir City manages the park via a public recreation easement. Amenities at the park include a boat-launching ramp, picnic tables, pavilions, trails, fishing piers, play equipment, and restrooms. Parcel 6, located just east of Parcel 5 is currently undeveloped, however, land cover and topography make it suitable for a variety of recreational uses including camping, picnicking, and hiking/walking. In addition, water depths and slopes also make the parcel desirable for water access and harbor areas. Approximately 39 percent of TVA land on this reservoir is allocated to Zone 6.
- Zone 7 (Shoreline Access). Zone 7 lands comprise 57.8 acres (4 percent) of the TVA land allocated on Fort Loudoun Reservoir. Zone 7 lands are TVA-owned lands where Section 26a applications and other land use approvals for private shoreline alterations are considered. Requests for private shoreline alterations are considered on parcels identified in this zone where such use was previously considered, and/or where the back-lying landowner possesses deeded rights of access, and where the proposed use would not conflict with the interests of the public.

These results vary only slightly from the estimates for Fort Loudoun Reservoir contained in the CVLP. The CVLP anticipated that some parcels of land may be better allocated to different land use zones than those initially identified. As discussed in Volume I of the EIS, TVA proposes to update the target allocations of the CVLP based on the eight draft RLMPs and to recalibrate the CVLP with the periodic updates to the NRP. The preliminary results of the Fort Loudoun Reservoir land planning effort were included in the proposed changes to the CVLP. Table 3-3 compares the results of this land planning effort and the 2011 CVLP estimates for Fort Loudoun Reservoir.

Under the draft RLMP, TVA would allocate a greater number of lands to Zone 6 (Developed Recreation) than Zone 7 (Shoreline Access) than estimated in the 2011 CVLP.

Table 3-3. Draft Fort Loudoun Reservoir Land Management Plan (Alternative B) and 2011 Comprehensive Valleywide Land Plan Comparison

Allocation Designation		Draft Fort Loudoun Reservoir Land Management Plan	2011 Comprehensive Valleywide Land Plan
Zone 2	Project Operations	32%	33%
Zone 3	Sensitive Resource Management	4%	3%
Zone 4	Natural Resource Conservation	21%	18%
Zone 5	Industrial	<1%	<1%
Zone 6	Developed Recreation	39%	2%
Zone 7	Shoreline Access	4%	44%

Zone 6 (Developed Recreation)

The 2011 CVLP underestimated the amount of land designated for Zone 6 (Developed Recreation). The planning team reviewed existing recreation agreements, recreational trends, and the possibility of creating new recreation sites. This analysis resulted in more lands being placed in the Zone 6 category.

Zone 7 (Shoreline Access)

The 2011 CVLP overestimated the amount of TVA property encumbered with shoreline access rights.

Of the 1,513.2 acres on Fort Loudoun Reservoir, there are no proposed allocation changes to 1,251.3 acres (82.7 percent); all proposed allocation changes involve 261.9 acres (17.3 percent). Of the 261.9 acres, TVA would allocate 102.6 acres (39.2 percent) to reflect existing land use agreements or commitments. The remaining 159.3 acres (60.8 percent) involve proposed parcel allocations that are not based on existing land use agreements or commitments. See Appendix B for parcel allocation description tables.

3.4 Property Administration

As administrators of public land, TVA uses the RLMP, along with TVA policies and guidelines, to manage resources and to respond to requests for the use of TVA land. Inquiries about or requests for the use of TVA land can be made to the TVA Public Land Information Center at 800-TVA-LAND or 800-882-5263 between 8 a.m. and 6 p.m. Eastern time Monday through Friday.

Pursuant to the TVA Land Policy, TVA would consider changing a land use designation outside of the normal planning process only for the purpose of water access for industrial or commercial recreational operations on privately owned back-lying land or to implement TVA's SMP.

Additionally, there are a small number of TVA parcels in the Valley that have deeded access rights for shoreline access that are currently utilized for other uses such as commercial recreation and industrial. Should the private back-lying land become residential, a request for a change of allocation of the parcel to Zone 7 (Shoreline Access) would be subject, with the appropriate environmental review, to action by the TVA Board or its designee or to Board-approved policy.

Consistent with the TVA Land Policy, those parcels or portions of parcels that have become fragmented from the reservoir may be declared surplus and sold at public auction. Public works/utility projects, such as easements for pipelines, power or communication wires, roads, or other public infrastructure, proposed on TVA land that do not affect the zoned land use or sensitive resources would not require an allocation change as long as such projects would be compatible with the use of the allocated zone. Proposed public works/utility projects would be subject to a project-specific environmental review. Any other requests involving a departure from the planned uses would require appropriate approval. Proposals consistent with TVA's policies and the allocated use, and otherwise acceptable to TVA, will be reviewed in accordance with NEPA and must conform to the requirements of other applicable environmental regulations and other legal authorities.

CHAPTER 4. PARCEL DESCRIPTIONS

This chapter describes the proposed land use determined to be most suitable for each parcel of TVA land as shown on the plan maps (Appendix A, Panels 1 through 5). The parcel descriptions include the acreage rounded to the nearest tenth and the proposed land use. Relevant data regarding the planned use are provided for each tract and include existing land uses, physical characteristics of the land, presence of existing private water use facilities, and any special considerations related to the future use. All existing private water use facilities with TVA permits are grandfathered, provided they are constructed in accordance with the plans approved by TVA.

Parcel 1 – (0.8 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This small parcel is located just downstream of Fort Loudoun Dam on the right descending bank of the Tennessee River. This parcel has two permanent easements to the Lenoir City Utility Board for utility operations. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed for cultural resources. Request for private water use facilities will not be considered.

Table 4-1. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Loudon, Tennessee
Topographic Map (Sheet No. and Quadrant)	130–SE
TVA D-Stage Map Numbers	1
Stream Mile and Bank	Tennessee River Mile 601.3R
Land Use/Land Cover	Upland hardwoods open shoreline
Known Dispersed Recreation Opportunities	None
Current Agreements/Commitments	Permanent easements to Lenoir City Utility Board for utilities
Potential Projects	Survey for cultural resources
Potential Partners	Lenoir City Utility Board

Parcel 2 – (1.4 acres)

Draft RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank below Fort Loudoun Dam. The area is locally known as Lane's Landing Bait and Tackle and is managed by a private individual via a revocable license agreement. Amenities include picnic tables, transient boat mooring, and bait and tackle sales. The area can be accessed by Lee Drive. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-2. Parcel Information

Location Component	Parcel Specific Information
County, State	Loudon, Tennessee
TVA D−Stage Map Numbers	1
Stream Mile and Bank	Tennessee River Mile 601.4R

Parcel 3 – (386.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is the Fort Loudoun dam reservation and receives heavy public use. This parcel consists of two noncontiguous tracts of land that is located along both banks of the Tennessee River at river mile 602. Existing facility development includes the dam powerhouse and associated access roads, transmission lines and substations; navigation lock and associated access roads and mooring cells; roads; public restrooms, shoreline fishing walkways on both river banks, and a boat-launching ramp. Undisturbed areas in this parcel have a medium probability for the presence of cultural resources. There are known archaeological sites in and adjacent to this parcel, but it has not been surveyed for cultural resources. Request for private water use facilities will not be considered.

Table 4-3. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Loudon, Tennessee
Topographic Map (Sheet No. and Quadrant)	130–SE and 138–SW
TVA D-Stage Map Numbers	1
Stream Mile and Bank	Tennessee River Mile 602B
Land Use/Land Cover	Upland hardwoods open shoreline
Known Dispersed Recreation Opportunities	Walking, jogging, bank fishing

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Permanent easements to the State of Tennessee for roadways • Permanent easement to the Lenoir City Utility Board for utility operations • Permanent land use permit to Bellsouth for utilities
Potential Projects	Survey for cultural resources
Potential Partners	Lenoir City Utility Board

Parcel 4 – (7.8 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of two noncontiguous tracts of land located north of Fort Loudoun dam reservation and contains a portion of the right-of-way (ROW) for Tennessee State Route (SR) 95. The intent of this parcel is to support the road ROWs. The road itself has a low probability for the presence of cultural resources. The parcel, however, covers areas that may not have been disturbed. These areas have a medium probability for the presence of cultural resources but it has not been surveyed. Request for private water use facilities will not be considered.

Table 4-4. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Loudon, Tennessee
Topographic Map (Sheet No. and Quadrant)	130–SE
TVA D-Stage Map Numbers	1
Stream Mile and Bank	Tennessee River Mile 602R
Land Use/Land Cover	Upland hardwoods open shoreline
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easements to the State of Tennessee for roadways
Potential Projects	Survey for cultural resources
Potential Partners	State of Tennessee

Parcel 5 – (49.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel includes Fort Loudoun Marina, a commercial recreation area, and Lenoir City Park, a public municipal park. Fort Loudoun Marina LLC, via a commercial recreation easement (Tract

No. XFL-144RE), operates the marina. Amenities include dry and wet boat storage, fuel, boat repair services, boat-launching ramp, and restaurant.

Lenoir City manages the park via a public recreation easement (Tract No. XTFL-130RE). Amenities include boat-launching ramp, picnic tables, pavilions, trails, fishing piers, play equipment, and restrooms. City Park Drive provides access to both the marina and Lenoir City Park.

This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-5. Parcel Information

Location Component	Parcel Specific Information
County, State	Loudon, Tennessee
TVA D−Stage Map Numbers	1
Stream Mile and Bank	Tennessee River Mile 602.5R

Parcel 6 – (38.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is currently undeveloped. This parcel is forested and has gentle topography making it suitable for a variety of recreational uses including camping, picnicking, and hiking/walking. In addition, water depths and slopes also make the parcel desirable for water access and harbor areas. The site is accessible via an existing 50-foot wide ROW that extends to Lakeview Road. A herony is known from this parcel. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-6. Parcel Information

Location Component	Parcel Specific Information
County, State	Loudon, Tennessee
TVA D−Stage Map Numbers	4
Stream Mile and Bank	Tennessee River Mile 602.5R

Parcel 7 – (0.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This small parcel is managed by TWRA via a public recreation permanent easement (Tract No. XTFL-17E). The site is currently undeveloped, and some shoreline erosion is occurring. The

parcel is accessible by River Chase Road. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support recreation development purposes will be considered.

Table 4-7. Parcel Information

Location Component	Parcel Specific Information
County, State	Loudon, Tennessee
TVA D−Stage Map Numbers	4
Stream Mile and Bank	Tennessee River Mile 602.5R

Parcel 8 – (2.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River in Fork Creek. This parcel boundary line is located along the centerline of the road, and the current land cover is deciduous forest. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities will be considered.

Table 4-8. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Loudon, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SW
TVA D-Stage Map Numbers	4
Stream Mile and Bank	Tennessee River Mile 603R
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XFL-36, XFL-37, XFL-38, XFL-39, XFL-40, and XFL-41
Structure Profile	Centerline of road
Current Agreements/Commitments	Approved water use facilities

Parcel 9 – (0.2 acres)

Proposed RLMP Allocation: Zone 6, Development

This shoreline parcel is adjacent to former TVA property (Tract No. XTFL-2) that was transferred to the State of Tennessee for recreation development. The parcel is currently undeveloped but receives some informal public recreation use. Some shoreline erosion is occurring on this parcel. The parcel is accessible from Lakeshore Drive. This parcel has a low probability for the

presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-9. Parcel Information

Location Component	Parcel Specific Information
County, State	Loudon, Tennessee
TVA D−Stage Map Numbers	4
Stream Mile and Bank	Tennessee River Mile 602.5R

Parcel 10 – (35.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is commonly known as “Arrival Point” to the navigation industry due to the presence of a frequently used safety harbor on the western edge of this parcel. This land is heavily forested and is very steep, which lowers the accessibility for dispersed recreation opportunities. The backlying land is part of Point Harbor Subdivision. There is a history of vegetation removal and driveway encroachments, as well as other structural encroachments. This parcel is heavily impacted by invasive exotic plants, such as Amir Honeysuckle and privet. No legal road access exists. No federally or state-listed species are known to exist on this parcel. There is a medium probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for water use facilities will not be considered.

Table 4-10. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Loudon, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SW
TVA D-Stage Map Numbers	3 and 4
Stream Mile and Bank	Tennessee River Mile 603R
Land Use/Land Cover	Pine/Hardwood Forest
Known Dispersed Recreation Opportunities	None Identified
Current Agreements/Commitments	None Identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA’s property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 11 – (2.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the right descending bank to the Tennessee River. The parcel is a navigation safety harbor. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed for historic properties. Request for private water use facilities will not be considered.

Table 4-11. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SW
TVA D-Stage Map Numbers	10
Stream Mile and Bank	Tennessee River Mile 610.1R
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Survey for historic properties
Potential Partners	None identified

Parcel 12 – (1.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is adjacent to former TVA property (Tract No. XTFL-1) that was transferred to the State of Tennessee for public recreation. The property has steep to moderate slopes and is currently undeveloped. It is adjacent to Twins Cove Drive but has no legal access. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-12. Parcel Information

Location Component	Parcel Specific Information
County, State	Loudon, Tennessee
TVA D−Stage Map Numbers	3
Stream Mile and Bank	Tennessee River Mile 603.5R

Parcel 13 – (10.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel includes three separate shoreline segments and fronts former TVA property (Tract No. XFL-110). The property was sold in 1969 to the Knoxville Young Women's Christian Association for group camp use and portions of the property (located above the 820-foot msl contour) were developed accordingly. The Knoxville Young Women's Christian Association property has since been sold to a private party. The southernmost (downstream) segment is accessible from Beals Chapel Road, but no legal access exists to the other two segments of this parcel. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support recreation development purposes aligning with deed restrictions will be considered.

Table 4-13. Parcel Information

Location Component	Parcel Specific Information
County, State	Loudon, Tennessee
TVA D−Stage Map Numbers	5
Stream Mile and Bank	Tennessee River Miles 607.4 to 608R

Parcel 14 – (1.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is adjacent to former TVA property (Tract No. XTFL-5) transferred to the State of Tennessee for public recreation. Amenities include a paved boat-launching ramp and parking lot at this location. Lakeland Drive provides access to the area. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support recreation development purposes will be considered.

Table 4-14. Parcel Information

Location Component	Parcel Specific Information
County, State	Loudon, Tennessee
TVA D−Stage Map Numbers	8
Stream Mile and Bank	Tennessee River Mile 609.4R

Parcel 15 – (2.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small, steep parcel is heavily forested with a pine and hardwood mixture. It is located adjacent to a boat-launching ramp operated and maintained by TWRA. No federally or state-listed species are known to exist. There is a medium probability for the presence of cultural resources; however, a survey for historic properties has not been conducted. Requests for water use facilities will not be considered.

Table 4-15. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Loudon, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SW
TVA D-Stage Map Numbers	10
Stream Mile and Bank	Tennessee River Mile 609.4R
Land Use/Land Cover	Pines/Hardwoods
Known Dispersed Recreation Opportunities	Hiking
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for archaeological sites and historic structures
Potential Partners	None identified

Parcel 16 – (0.5 acre)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the right descending bank to the Tennessee River and contains portions of the road ROWs for Lakeland Drive and Coulter Shoals Circle. The intent of this parcel is to support the road ROWs.

The road itself has a low probability for the presence of cultural resources. It is adjacent to a parcel that has a medium probability for the presence of cultural resources. Earth disturbing activities on the shoulder of this road could disturb cultural resources. Request for private water use facilities will not be considered.

Table 4-16. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SW
TVA D-Stage Map Numbers	10
Stream Mile and Bank	Tennessee River Mile 609.3R
Land Use/Land Cover	Road right-of-way and maintained lawn
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Loudon County Highway Department for a roadway
Potential Projects	None identified
Potential Partners	Loudon County Highway Department

Parcel 17 – (3.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River. This parcel fronts Coulter Shoals Subdivision and lies entirely below the 820-foot msl contour. The current land cover is maintained laws and upland hardwood forest. This parcel has a low probability for the presence of cultural resources, but it has not been adequately surveyed. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities will be considered.

Table 4-17. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Loudon, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SW
TVA D-Stage Map Numbers	8
Stream Mile and Bank	Tennessee River Mile 609.5R
Land Use/Land Cover	Maintained lawn and upland hardwood forest
Fronts Former TVA Tract (s)	XFL-49
Structure Profile	820–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 18 – (2.8 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the right descending bank to the Tennessee River and is a navigation safety harbor. This parcel has a high probability for the presence of cultural

resources, but it has not been survey for cultural resources. Request for private water use facilities will not be considered.

Table 4-18. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SW
TVA D-Stage Map Numbers	10
Stream Mile and Bank	Tennessee River Mile 610.1R
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Survey for cultural resources
Potential Partners	None identified

Parcel 19 – (36.9 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel, commonly known as Salt Peter Bluff, offers a scenic buffer between the backlying Bluff Point Subdivision and Fort Loudoun Reservoir. The parcel is bounded by a safety harbor on the west end and is heavily forested. Rock outcrops exist centrally on the parcel. Legal road access does not exist. No federally or state-listed species are known to exist on this parcel. One cave that is not ranked as having special significance is documented as being present. There is a high probability for the presence of cultural resources; however, a survey for historical properties has not been conducted. Requests for water use facilities will not be considered.

Table 4-19. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox and Loudon, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SW
TVA D-Stage Map Numbers	10
Stream Mile and Bank	Tennessee River Miles 610.2 to 610.5R
Land Use/Land Cover	Hardwoods
Known Dispersed Recreation Opportunities	Informal Hiking
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 20 – (8.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel contains two tracts of land at the mouth of Holder Branch: a larger linear tract on an easternmost peninsula and a smaller tract on the tip of the adjacent peninsula to the west. The smaller tract is covered with hardwoods, while the larger tract is covered with a mixture of hardwoods and pines. The shoreline of the larger tract is exhibiting more progressive erosion. This parcel is located in close proximity to Concord Park, which is one of the more highly used areas on the reservoir. No legal road access exists to either tract included in this parcel. No federally or state-listed species are known to exist. There is a medium probability for the presence of cultural resources on this tract; however, this parcel has not been surveyed for historic properties. Requests for water use facilities will not be considered.

Table 4-20. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SW
TVA D-Stage Map Numbers	15
Stream Mile and Bank	Tennessee River Mile 615.8L
Land Use/Land Cover	Pines/Hardwoods
Known Dispersed Recreation Opportunities	Hiking and bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Consider stabilization of a portion of the shoreline • Systematic survey for archaeological sites and historic structures
Potential Partners	None identified

Parcel 21 – (65.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This long shoreline parcel is adjacent to former TVA property (Tract No. XTFL-75) that was transferred to Knox County for public recreation. Knox County has developed Concord Park at this location. A wide range of recreation amenities present include picnic tables and pavilions, boat-launching ramps, trails, fishing piers, play equipment, sports fields, swimming pool, and

swimming beach. Concord Marina, a commercial operations that includes wet slip boat storage, fuel and repair services, a boat-launching ramp, and a restaurant, is also located within the park. Concord Park is accessible from Northshore Drive.

This parcel has varying probabilities for the presence of cultural resources. Portions of this parcel intersect with a known archaeological site. Other portions appear to be highly eroded or developed. However, this parcel has not been adequately surveyed. Generally, the parcel has a medium probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support recreation development purposes will be considered.

Table 4-21. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	17, 18, and 19
Stream Mile and Bank	Tennessee River Miles 616 to 617.5R

Parcel 22 – (0.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the right descending bank of the Tennessee River and consists of five noncontagious tracts of land. This parcel also contains contain portions of the road Row for SR-332 and Northshore Drive. The intent of this parcel is to support the road ROW.

The road itself has a low probability for the presence of cultural resources. This parcel and adjacent areas have not been surveyed for cultural resources. Request for private water use facilities will not be considered.

Table 4-22. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SW
TVA D-Stage Map Numbers	17 and 18
Stream Mile and Bank	Tennessee River Miles 618 to 618R
Land Use/Land Cover	Road right-of-way and maintained lawn
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Knox County for a roadway
Potential Projects	Survey for historic properties
Potential Partners	Knox County

Parcel 23 – (5.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel contains two tracts of land: a smaller tract to the west and a larger tract to the east. Both tracts are located along the southern side of the Norfolk Southern Railroad. The smaller, more westward tract is adjacent to Willow Cove Subdivision; the larger, more eastward tract is adjacent to Taylor's Landing Subdivision. Both tracts are covered with pines and have no legal road access. The tract adjacent to Taylor's Landing Subdivision has a history of unauthorized vegetation clearing. No federally or state-listed species are known to exist. There is a medium to low probability for the presence of cultural resources; however, a survey for historical properties has not been conducted. Requests for water use facilities will not be considered.

Table 4-23. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SW
TVA D-Stage Map Numbers	16 and 17
Stream Mile and Bank	Little Turkey Creek Miles 0.8 – 1.7L
Land Use/Land Cover	Pines
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 24 – (4.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is managed via a revocable license agreement to the Town of Farragut for Anchor Park. Amenities include picnic tables, picnic pavilion, play equipment, trails, play fields, plat courts and restrooms. Anchor Park is accessible from Turkey Creek Road. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support recreation development purposes will be considered.

Table 4-24. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	17
Stream Mile and Bank	Tennessee River Mile 616.5R

Parcel 25 – (1.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the left descending bank of the Turkey Creek and is adjacent to the Lenoir City Waste Water Treatment Plant. This parcel serves as a vegetation buffer along the shoreline. This parcel has a low probability for cultural resources, but it has not been surveyed. Requests for private water use facilities will not be considered.

Table 4-25. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SW
TVA D-Stage Map Numbers	17
Stream Mile and Bank	Turkey Creek Mile 0.5L
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Survey for cultural resources
Potential Partners	City of Lenoir City

Parcel 26 – (4.3 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel consists of five non-contiguous tracts of land along the right descending bank of Sinking Creek and contains portions of a railroad ROW. The intent of this parcel is to support the railroad ROW. The railroad itself has a low probability for the presence of cultural resources. There are, however, portions of this parcel that intersect areas that have a medium probability of cultural resources and have not been surveyed. Requests for use of TVA lands and associated water-based structures to support industrial purposes will be considered.

Table 4-26. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SW and 138–SE
TVA D-Stage Map Numbers	18, 18-1, 18-2, and 19
Stream Mile and Bank	Sinking Creek Miles 0.3 to 1.3R
Land Use/Land Cover	Railroad right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Southern Railroad Company for a railroad

---

Parcel 27 – (0.6 acre)

Proposed RLMP Allocation: Zone 2, Project Operations

This small parcel is located along the right descending bank of the Sinking Creek and is managed via a permanent easement to the First Utility District of Knox County for utilities. The undisturbed portion of this parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities will not be considered.

Table 4-27. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SW
TVA D-Stage Map Numbers	18
Stream Mile and Bank	Sinking Creek Mile 0.4R
Land Use/Land Cover	Upland hardwoods and maintained lawn
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to First Utility District of Knox County for utilities
Potential Projects	Survey for cultural resources
Potential Partners	First Utility District of Knox County

Parcel 28 – (2.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of a thin strip of land around a pond on the north side of the Norfolk Southern Railroad and a small tract of land south of the railroad. The tract north of the railroad is

heavily impacted by mowing encroachments. No federally or state-listed species are known to exist. There is a medium probability for the presence of cultural resources; however, a survey for historical properties has not been conducted. Requests for water use facilities will not be considered.

Table 4-28. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SW
TVA D-Stage Map Numbers	18 and 18-1
Stream Mile and Bank	Sinking Creek Miles 0.5 to 0.7R
Land Use/Land Cover	Grass and undergrowth
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 29 – (0.3 acre)

Proposed RLMP Allocation: Zone 2, Project Operations

This small parcel is located along the right descending bank of the Sinking Creek and is adjacent to former TVA property (Tract No. XFL-65). This parcel is also adjacent to a First Utility District of Knox County pumping station. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Request for private water use facilities will not be considered.

Table 4-29. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SW
TVA D-Stage Map Numbers	18
Stream Mile and Bank	Sinking Creek Mile 1R
Land Use/Land Cover	Upland hardwoods and maintained lawn
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to First Utility District of Knox County for utilities
Potential Projects	None identified
Potential Partners	First Utility District of Knox County

Parcel 30 – (0.9 acre)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River in the Sinking Creek embayment. This parcel lies entirely below the 815-foot msl contour, and the current land cover is maintained lawns. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities will be considered.

Table 4-30. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SE and 138-SW
TVA D-Stage Map Numbers	18
Stream Mile and Bank	Tennessee River Mile 617.2R
Land Use/Land Cover	Maintained lawns
Fronts Former TVA Tract (s)	XFL-65
Structure Profile	820–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 31 – (0.3 acre)

Proposed RLMP Allocation: Zone 2, Project Operations

This small parcel is located along the right descending bank of the Sinking Creek and is managed via a permanent easement to the First Utility District of Knox County for utilities. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Request for private water use facilities will not be considered.

Table 4-31. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SW
TVA D-Stage Map Numbers	18
Stream Mile and Bank	Sinking Creek Mile 1.2R
Land Use/Land Cover	Upland hardwoods and maintained lawn
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to First Utility District of Knox County for Utilities
Potential Projects	Survey for cultural resources
Potential Partners	First Utility District of Knox County

Parcel 32 – (1.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel adjoins former TVA property (Tract No. XTFL-77) transferred to Knox County for public recreation. The land around this parcel is steep and wooded and it is currently undeveloped. Rodgers Island Lane provides access to the site. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-32. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	20
Stream Mile and Bank	Tennessee River Mile 618R

Parcel 33 – (10.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel fronts former TVA property (Tract Nos. XTFL-76 and XTFL–78) that was transferred to Knox County for public recreation. Carl Cowen Park borders the downstream portion of the parcel. Amenities at the park include a boat-launching ramp, picnic tables, picnic pavilions, trails, play equipment, fishing piers, and restrooms. The adjacent Admiral Farragut Park, situated just upstream, includes picnic tables, a pavilion, trails, and a play court. Both parks are located on Northshore Drive. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support recreation development purposes will be considered.

Table 4-33. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	23
Stream Mile and Bank	Tennessee River Miles 621.5 to 622.3R

Parcel 34 – (2.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River fronting Historic Lowes Ferry Subdivision. This parcel lies entirely below the 820-foot msl contour, and the

current land cover is deciduous forest. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities will be considered. Restrictions to water use facilities may apply due to the Lowe's Ferry light, anchor rod, deed restrictions, or other restrictions outlined in the associated environmental assessment for the subdivision development.

Table 4-34. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SE
TVA D-Stage Map Numbers	23
Stream Mile and Bank	Tennessee River Mile 622.5R
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XTFL-78
Structure Profile	Various
Current Agreements/Commitments	• Approved water use facilities • Environmental assessment

---

Parcel 34a – (0.5 acre)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This very small tract is located adjacent to Admiral's Landing Subdivision. It is covered by undergrowth. No federally or state-listed species are known to exist. There is a low to medium probability for the presence of cultural resources on this tract; however, a survey for historical properties has not been conducted. Requests for water use facilities will not be considered.

Table 4-34a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SE
TVA D-Stage Map Numbers	23
Stream Mile and Bank	Tennessee River Mile 622.5R
Land Use/Land Cover	Undergrowth
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 35 – (3.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel includes four noncontiguous tracts of land bordering former TVA property (Tract Nos. XTFL-79, XTFL-80, XTFL-81, and XTFL-82) that were transferred to Knox County for public recreation.

The upstream most part of the parcel is adjacent to XTFL-79 and is undeveloped with no legal access. However, the deep water around this section of the parcel, which is located in a protected cove, attracts boat fishing.

Proceeding upstream, the next parcel segment is adjacent to XTFL-80. The tract's steep topography limits recreation development options but the property is accessible from a 30-foot-wide ROW. The portion of this parcel adjacent to XTFL-80 has a high probability for the presence of cultural resources.

Further upstream, the next section of the parcel adjoins Tract XTFL-81. Tract XTFL-81 has a gentle slope, is forested, and is accessible from Keller Bend Road. Knox County has designated this area as Keller Bend Park, and an informal trail and beach are located on the property. One cave is on this parcel and two other caves are close the parcel. One of the nearby caves (less than 200 feet from the parcel) has historical evidence of a gray bat colony and is used heavily by the public, which likely has contributed to the abandonment of the cave by roosting bats. The portion of this parcel adjacent to XTFL-81 has a medium probability for the presence of cultural resources, but has not been surveyed.

The upstream most segment of this parcel adjoins XTFL-82. This property is located near Fort Loudoun Yacht Club and is accessible from Lake Front Drive. No recreation facilities have been developed on this area. The portion of this parcel adjacent to XTFL-82 has a low to medium probability for the presence of cultural resources, but it has not been surveyed.

Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-35. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	23, 24, and 25
Stream Mile and Bank	Tennessee River Miles 623.3 to 626.8R

Parcel 35a – (0.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small shoreline parcel is located south of St Germaine Drive and Admiral's Landing. The parcel consists mainly of shoreline backed by hardwoods. No federally or state-listed species are known to exist. There is a low probability for the presence of cultural resources on this tract; however, a survey for historical properties has not been conducted. Requests for water use facilities will not be considered.

Table 4-35a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SE
TVA D-Stage Map Numbers	23
Stream Mile and Bank	Tennessee River Mile 622.6R
Land Use/Land Cover	Hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Survey for cultural resources
Potential Partners	None identified

Parcel 36 – (5.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel adjoins former TVA property (Tract No. XTFL-83) transferred to Knox County for public recreation. Most of this property is steep and wooded, and it is currently undeveloped. The northern end of the tract borders Badgett Road. There is no legal access to the southern segment of the property. There is a cave located less than 50 feet from this parcel. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-36. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	29
Stream Mile and Bank	Tennessee River Miles 632.2 to 632.7R

Parcel 37 – (3.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the right descending bank to the Tennessee River. The parcel is a navigation safety harbor. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Request for private water use facilities will not be considered.

Table 4-37. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–NE and 138–SE
TVA D-Stage Map Numbers	29
Stream Mile and Bank	Tennessee River Mile 632.4R
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Survey for cultural resources
Potential Partners	None identified

Parcel 38 – (0.5 acre)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small shoreline parcel is located south of Badgett Road. The parcel consists mainly of shoreline backed by a thin area of hardwoods. No federally or state-listed species are known to exist. There is a low probability for the presence of cultural resources on this tract; however, a survey for historical properties has not been conducted. Requests for water use facilities will not be considered.

Table 4-38. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-NE
TVA D-Stage Map Numbers	29
Stream Mile and Bank	Tennessee River Mile 633.2R
Land Use/Land Cover	Hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 39 – (0.1 acre)

Proposed RLMP Allocation: Zone 2, Project Operations

This small parcel is located along the right descending bank of the Tennessee River and contains a portion of the road ROW for Badgett Road. The road itself has a low probability for the presence of cultural resources. It is adjacent to an area with a medium probability for the presence of cultural resources. Request for private water use facilities will not be considered.

Table 4-39. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–NE
TVA D-Stage Map Numbers	29
Stream Mile and Bank	Tennessee River Mile 632.4R
Land Use/Land Cover	Road right-of-way and upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to Knoxville Electric Power and Water Board for utilities • Permanent easement to Knox County, Tennessee for a roadway
Potential Projects	None identified
Potential Partners	• Knoxville Electric Power and Water Board • Knox County, Tennessee

---

Parcel 40 – (6.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel includes two noncontiguous tracts of land. The downstream tract is adjacent to former TVA property (Tract No. XTFL-84), and the upstream section is located adjacent to former TVA property (Tract No. XTFL-86). TVA transferred XTFL-84 and XTFL-86 to Knox County for public recreation. These tracts are currently undeveloped but their topography and strategic location on the reservoir make them well suited for future recreation development. Badgett Road provides access to both parcels. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-40. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	29 and 35
Stream Mile and Bank	Tennessee River Miles 632.8 to 633.2R

Parcel 41 – (1.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is located adjacent to former TVA property (Tract No. XTFL-85) that was transferred to Knox County for public recreation purposes. This parcel is currently undeveloped, and there is no known legal road access to the parcel. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-41. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	35
Stream Mile and Bank	Tennessee River Mile 634R

Parcel 41a – (0.7 acre)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This shoreline parcel is located adjacent to former TVA property (Tract No. XTFL-86) that was transferred to Knox County for public recreation purposes. In 1952, TVA, pursuant to Section 4(k)(a) of the TVA Act of 1933, as amended, transferred certain properties to Knox County subject to a restriction that the property be used for public recreation purposes.

In 2004, TVA, at the request of Knox County, modified the Tract No. XTFL-86 deed to allow the property to be sold for residential development. TVA also granted a private recreation easement (Tract No. XFL-136RE) to allow for residential access across this parcel and the construction and maintenance of water use facilities.

This parcel has a high probability for the presence of cultural resources; however, a survey for historical properties has not been conducted. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities will be considered.

Table 4-41a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–NE
TVA D-Stage Map Numbers	35
Stream Mile and Bank	Tennessee River Mile 634R
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XTFL-86
Structure Profile	Varies
Current Agreements/Commitments	Private recreation easement for water use facilities

Parcel 41b – (0.3 acre)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This shoreline parcel is located adjacent to former TVA property (Tract No. XTFL-86) that was transferred to Knox County for public recreation purposes. In 1952, TVA, pursuant to Section 4(k)(a) of the TVA Act of 1933, as amended, transferred certain properties to Knox County subject to a restriction that the property be used for public recreation purposes.

In 2004, TVA, at the request of Knox County, modified the Tract No. XTFL-86 deed to allow the property to be sold for residential development. This segment of shoreline intentionally excluded from allowing the construction and maintenance of water use facilities.

This parcel has a high probability for the presence of cultural resources; however, a survey for historical properties has not been conducted. Water use facilities have not been constructed along the shoreline, and future requests for private water use facilities will not be considered.

Table 4-41b. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–NE
TVA D-Stage Map Numbers	35
Stream Mile and Bank	Tennessee River Mile 634.4R
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 42 – (2.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the right descending bank to the Tennessee River. The parcel is a navigation safety harbor. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Request for private water use facilities will not be considered.

Table 4-42. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–NE
TVA D-Stage Map Numbers	35
Stream Mile and Bank	Tennessee River Mile 634.4R
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Survey for cultural resources
Potential Partners	None identified

Parcel 43 – (1.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is located adjacent to former TVA property (Tract No. XTFL-87) that was transferred to Knox County for public recreation purposes. This parcel is steep and heavily forested, and is currently undeveloped, and there is no known legal road access to the parcel. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-43. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	36
Stream Mile and Bank	Tennessee River Mile 635.5R

Parcel 44 – (2.7 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel is located on the tip of a peninsula just upstream from Duncan Boat Dock and lies below the maximum shoreline contour. It is covered with wetland vegetation. There is no legal road access. No federally or state-listed species are known to be present. This parcel has a high probability for the presence of cultural resources. Requests for water use facilities will not be considered.

Table 4-44. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	147-NW
TVA D-Stage Map Numbers	36
Stream Mile and Bank	Tennessee River Mile 635.7R
Land Use/Land Cover	Wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries
Potential Partners	None identified

Parcel 45 – (2.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is a designated safety harbor and can be utilized by commercial barges and recreational boats during adverse weather conditions or equipment malfunction. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Future development of this tract will be restricted, and requests for private water use facilities will not be considered.

Table 4-45. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	147–NW
TVA D-Stage Map Numbers	36

Location Component and Public Involvement Opportunities	Parcel Specific Information
Stream Mile and Bank	Tennessee River Mile 637.5R
Land Use/Land Cover	Hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for cultural resources
Potential Partners	None identified

Parcel 46 – (4.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel includes two noncontiguous tracts of land adjoining former TVA property (Tract Nos. XTFL-88 and XTFL-89) that were transferred to Knox County for public recreation.

The downstream segment borders Tract No. XTFL-88. This property is strategically located in an area that could meet future recreation needs. It has moderate slopes and is forested. The tract is located off Hauser Road.

The upstream parcel borders Tract No. XTFL-89. This property is also located in an urbanized area and could help meet developed recreation needs. It also has moderate slopes and is forested. The property does not currently have legal access.

This parcel has a medium probability for the presence of cultural resources, but has not been surveyed. Requests for use of TVA lands and associated water based structures to support developed recreation purposes will be considered.

Table 4-46. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	36
Stream Mile and Bank	Tennessee River Miles 637.5 to 638R

Parcel 47 – (1.7 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This series of islands is known as the Lyons Island Complex. The islands are small and covered with pine and hardwoods. This island complex, along with the Looney Island Complex (Tract No. XFL-49PT), has been incorporated into a Wildlife Management Area managed by TWRA to allow for enforcement of waterfowl hunting regulations. No federally or state-listed species are

known to exist on this parcel. There is a high probability for the presence of cultural resources on this tract; however, a survey for historical properties has not been conducted. Requests for water use facilities will not be considered.

Table 4-47. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	147-NW
TVA D-Stage Map Numbers	43
Stream Mile and Bank	Tennessee River Mile 639.7
Land Use/Land Cover	Pines and Hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Tennessee Wildlife Resources Agency
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 48 – (69.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is Sequoyah Park and managed under a term easement to the City of Knoxville for public recreation. Amenities at Sequoyah Park include trails, boat-launching ramp, picnic facilities, play fields, and restrooms. The park is located off Cherokee Boulevard. Additional information about Sequoyah Park can be found on the City of Knoxville's Web site: http://knoxvilletn.gov/government/city_departments_offices/parks_and_recreation/

This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-48. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	47, 48, 49, and 50
Stream Mile and Bank	Tennessee River Miles 641.5 to 643.4R

Parcel 49 – (8.7 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This series of islands is known as the Looney Island Complex. The largest island in the complex is covered with dense vegetation, mostly pines and hardwoods. This island complex, along with the Lyons Island Complex (Tract No. XFL-47PT), has been incorporated into a Wildlife Management Area managed by TWRA to allow for enforcement of waterfowl hunting regulations. Although no federally or state-listed species are known to exist on this parcel, Looney Island does provide habitat for a wading bird colony that has housed up to one hundred Great Blue Heron nests at a time. There is a high probability for the presence of cultural resources on this tract; however, an archaeological survey has not been conducted. Requests for water use facilities will not be considered.

Table 4-49. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	147-NW
TVA D-Stage Map Numbers	45 and 49
Stream Mile and Bank	Tennessee River Mile 643
Land Use/Land Cover	Pines and hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Tennessee Wildlife Resources Agency
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 50 – (3.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the right descending bank to the Tennessee River. This parcel is managed via a permanent easement to the City of Knoxville for a waste water treatment plant. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Request for private water use facilities will not be considered.

Table 4-50. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	147–NW
TVA D-Stage Map Numbers	57 and 58

Location Component and Public Involvement Opportunities	Parcel Specific Information
Stream Mile and Bank	Tennessee River Mile 645.9
Land Use/Land Cover	Industrial waste water treatment plant
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to the City of Knoxville for a waste water treatment plant
Potential Projects	Systematic survey for cultural resources
Potential Partners	City of Knoxville

Parcel 51 – (0.7 acre)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is located along the right descending bank of the Tennessee River and is adjacent to former TVA property (Tract No. XFL-103). The adjacent land owner is the Signal Mountain Concrete Company. The intent of this parcel is to support industrial land use and the railroad ROW. Most of this parcel has a low probability for undisturbed cultural resources. A portion, however, fronts a green space that has a high probability for the presence of cultural resources, but has not been surveyed. Requests for use of TVA lands and associated water-based structures to support industrial purposes will be considered.

Table 4-51. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	147–NW
TVA D-Stage Map Numbers	57 and 58
Stream Mile and Bank	Tennessee River Miles 645.8 to 646.2R
Land Use/Land Cover	Railroad right-of-way and industrial
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Approvals for barge terminals to the City of Knoxville and Signal Mountain Concrete Company

---

Parcel 52 – (0.2 acre)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is managed via a revocable license agreement to the City of Knoxville for public recreation. Amenities include a boat-launching ramp and parking lot, and the area is located adjacent to Neyland Drive. This parcel has a high probability for cultural resources; however, a

survey for historical properties has not been conducted. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-52. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	59
Stream Mile and Bank	Tennessee River Mile 646.5R

Parcel 53 – (13.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the right descending bank to the Tennessee River and contains a portion of the road ROW for SR-158 and Neyland Drive. The intent of this parcel is to support the road ROWs and existing utilities. The road itself has a low probability for the presence of cultural resources; however, a survey for historical properties has not been conducted. Requests for private water use facilities will not be considered.

Table 4-53. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	147–NW
TVA D-Stage Map Numbers	57, 58, 59, 62, 63,64, and 65
Stream Mile and Bank	Tennessee River Miles 645.9 to 647.8R
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to Colonial Pipeline Company for utilities • Revocable licenses to the City of Knoxville for recreation and utilities • Revocable license to the Knoxville Utilities Board for utilities • Permanent easements to the City of Knoxville for recreation, road right-of-way, and utilities
Potential Projects	None identified
Potential Partners	• City of Knoxville • Knoxville Utility Board • Colonial Pipeline Company

---

Parcel 54 – (3.5 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is located along the right descending bank of the Tennessee River and contains a portion of the railroad ROW. This parcel is managed via a permanent easement to the Southern Railways Company for a railroad. The intent of this parcel is to support the railroad ROW. The railroad itself has a low probability for the presence of cultural resources. There are, however, portions of this parcel that are outside the railroad bed. These areas have a high probability for the presence of cultural resources, but have not been surveyed; however, a survey for historical properties has not been conducted. Requests for use of TVA lands and associated water-based structures to support industrial purposes will be considered.

Table 4-54. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	147–NW
TVA D-Stage Map Numbers	64, 65, and 67
Stream Mile and Bank	Tennessee River Miles 647.2 to 648.3R
Land Use/Land Cover	Railroad right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to the Southern Railways Company for a railroad

Parcel 55 – (9.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel includes two tracts of land managed by the City of Knoxville under recreation easement agreements (Tract Nos. XTFL-113RE and XTFL-126RE). This recreation area, known as Volunteer Landing, includes trails, a picnic pavilion, play equipment, and restrooms. A restaurant and a marina are also located within the park. Neyland Drive provides access to this area. This parcel has a medium to high probability for the presence of cultural resources, but has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-55. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	63, 64, and 65
Stream Mile and Bank	Tennessee River Miles 647 to 648.3R

Parcel 56 – (0.6 acre)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is adjacent to former TVA property (Tract No. XTFL-95) that was transferred to Knox County for public recreation. The parcel is managed as part of Holston River Park. Amenities on the parcel consist of a boat-launching ramp and ramp parking lot. Holston Hills Road provides access to the park. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-56. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	73
Stream Mile and Bank	Holston River Mile 1.5R

Parcel 57 – (4.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located adjacent to former TVA property (Tract No. XTFL-93) that was transferred to Knox County for public recreation. Development on this site includes a golf practice facility managed by the University of Tennessee. Knox County also has plans to develop a greenway on a portion of this parcel. This parcel has a high probability for the presence of cultural resources. A portion of this parcel has been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-57. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	45
Stream Mile and Bank	Tennessee River Mile 643.4L

Parcel 58 – (2.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of two noncontiguous tracts of land located along the left descending bank to the Tennessee River. This parcel is adjacent to a former TVA tract that is now in the custody and control of the Department of the Navy. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Request for private water use facilities will not be considered.

Table 4-58. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	147–NW
TVA D-Stage Map Numbers	45
Stream Mile and Bank	Tennessee River Mile 643.2L
Land Use/Land Cover	Maintained lawn and upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Appurtenant easement to the department of the Navy
Potential Projects	Survey for cultural resources
Potential Partners	Department of the Navy

Parcel 59 – (1.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is adjacent to former TVA property (Tract No. XTFL-94) that was transferred to Knox County for public recreation. Knox County has developed Marine Park at this location, and amenities include a boat ramp, parking lot and picnic tables. U.S. Highway 129 provides access to this recreation area.

Part of this parcel has a high probability for the presence of cultural resources. The remainder has a low probability for the presence of cultural resources. None of this parcel has been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-59. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	45
Stream Mile and Bank	Tennessee River Mile 643L

Parcel 60 – (2.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is adjacent to former TVA property (Tract No. XTFL-92) that was transferred to Knox County for public recreation. Maloney Road Park has been developed at this location and amenities include a picnic pavilion, trails, and a boat-launching ramp. Maloney Road provides access to the park. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-60. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	43
Stream Mile and Bank	Tennessee River Mile 638.5L

Parcel 61 – (2.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 820-foot msl contour, and the current land cover is deciduous forest. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities will be considered.

Table 4-61. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	147–NW
TVA D-Stage Map Numbers	42
Stream Mile and Bank	Tennessee River Mile 638.5L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XFL-83
Structure Profile	820–foot mean sea level
Current Agreements/Commitments	None

Parcel 62 – (1.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of two small tracts of land. The smallest portion lies in the back of a cove close to Maloney Road Park and is covered by pines and hardwoods. The larger portion is located at the mouth of the same cove and is in need of vegetation improvements. The larger portion is adjacent to the University of Tennessee Agricultural Experimentation Farm and most of this tracts shoreline has been stabilized. No federally or state-listed species are known to exist. There is a medium probability for the presence of cultural resources on this tract; however, a survey for historical properties has not been conducted. Requests for water use facilities will not be considered.

Table 4-62. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	147–NW
TVA D-Stage Map Numbers	42
Stream Mile and Bank	Tennessee River Mile 638.5R
Land Use/Land Cover	Pines and hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Systematic survey for historic properties • Vegetation Management Plan
Potential Partners	None identified

Parcel 63 – (5.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel is located at the entrance to the Knob Creek embayment, which houses I.C. King Park. This parcel is grass-covered due to agricultural testing associated with the University of Tennessee Agricultural Experimentation Farm adjacent to this parcel. Much of the shoreline has been stabilized with rock. No known federally or state-listed species exist on this parcel. Although this parcel has not been surveyed for historic properties, it has a high probability for the presence of cultural resources. Requests for private water use facilities will not be considered.

Table 4-63. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	147-NW
TVA D-Stage Map Numbers	42
Stream Mile and Bank	Tennessee River Mile 637.8R
Land Use/Land Cover	Grass
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 64 – (4.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of three tracts (a northern peninsula, an island, and a southern peninsula) which are located in the same cove as I.C. King Park. The northern peninsula is mostly bare ground, the island is covered by pine trees, and the southern peninsula has a mixture of bare ground and pine/hardwood cover. The southern peninsula is located adjacent to Skyranch Airport. A water intake for emergency fire hydrant use at the airport is located on the southern peninsula. This parcel receives a moderate to high amount of dispersed recreation, especially bank fishing. No legal road access exists to any portion of this parcel. No federally or state-listed species are known to exist. There is a medium probability for the presence of cultural resources on this tract; however, a survey for historical properties has not been conducted. Requests for water use facilities will not be considered.

Table 4-64. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	147-NW
TVA D-Stage Map Numbers	42
Stream Mile and Bank	Tennessee River Mile 637.7R
Land Use/Land Cover	Pines and hardwoods
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 65 – (23.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located adjacent to former TVA property (Tract Nos. XTFL-90 and XTFL-91) transferred to Knox County for public recreation. This area has been developed as I. C. King Park. Amenities include a boat-launching ramp, bike and walking trails, a fishing pier, and picnic tables. The park is accessible from U.S. Highway 129. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-65. Parcel Information

Location Component	Parcel Specific Information
County, State	Knox, Tennessee
TVA D−Stage Map Numbers	42
Stream Mile and Bank	Tennessee River Mile 637.6L

Parcel 66 – (1.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of two noncontiguous tracts of land located along the both banks of Knob Creek. This parcel contains a portion of the road ROW for U.S. Highway 129. The intent of this parcel is to support the road ROW. The road itself has a low probability for the presence of undisturbed cultural resources. Request for private water use facilities will not be considered.

Table 4-66. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	147−NW
TVA D-Stage Map Numbers	45
Stream Mile and Bank	Knob Creek Mile 0.5B
Land Use/Land Cover	Maintained lawn and upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	Tennessee Department of Transportation

Parcel 67 – (1.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River on the Little River embayment. It fronts Anchorage Subdivision and includes a community dock and several private water use facilities. This parcel lies entirely below the 820-foot msl contour, and the current land cover is maintained lawn. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities will be considered.

Table 4-67. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee
Topographic Map (Sheet No. and Quadrant)	147–SW
TVA D-Stage Map Numbers	37
Stream Mile and Bank	Little River Mile 2.5R
Land Use/Land Cover	Maintained lawn
Fronts Former TVA Tract (s)	XFL-31
Structure Profile	820–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 68 – (19.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel includes two commercial recreation areas operated on TVA lands via term easements and a segment that borders former TVA property (Tract No. XTFL-14) that was transferred to the State of Tennessee for public recreation.

Both commercial areas are located along the right bank of Stock Creek. Willow Point Marina is located on the downstream segments. Marina amenities include fuel and boat repair services, wet slip boat storage, a boat-launching ramp and a restaurant. Southlake RV Park, located upstream and on the opposite side of Maryville Pike, includes a campground and swimming pool.

The segment that borders Tract No. XTFL-14 is located along the left bank of Stock Creek. A public boat-launching ramp and parking lot are located on this property. Maryville Pike (SR-33) provides access to all of these areas. A bald eagle's nest that has been active since 2007 occurs within 660 feet of this parcel.

This parcel has not been surveyed for historic properties. Areas that have not been deeply disturbed by commercial development have a medium probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-68. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee Knox, Tennessee
TVA D−Stage Map Numbers	37 and 46
Stream Mile and Bank	Little River Mile 3.2R

Parcel 69 – (1.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of two noncontiguous tracts of land located along the both banks of Stock Creek. This parcel contains a portion of the road ROW for SR-33. The intent of this parcel is to support the road ROW. The road itself has a low probability for the presence of cultural resources. Request for private water use facilities will not be considered.

Table 4-69. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Knox, Tennessee Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	147–SW
TVA D-Stage Map Numbers	46
Stream Mile and Bank	Stock Creek Mile 0.5B
Land Use/Land Cover	Maintained lawn and upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	Tennessee Department of Transportation

Parcel 70 – (1.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel borders former TVA property (Tract No. XTFL-15) that was transferred to the State of Tennessee for public recreation. The State has developed a boat-launching ramp and parking lot at this location. Maryville Pike (SR-33) provides access to the area. This parcel has a low

probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-70. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee
TVA D−Stage Map Numbers	39
Stream Mile and Bank	Little River Mile 5.5R

Parcel 71 – (0.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along Little River and is mostly grass-covered. No federally or state-listed species are known to exist. There is a low to medium probability for the presence of cultural resources on this tract; a survey for historical properties has not been conducted. One unpermitted dock exists as a violation on this parcel; however, future requests for water use facilities will not be considered.

Table 4-71. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	147-SW
TVA D-Stage Map Numbers	39
Stream Mile and Bank	Little River Mile 4.6L
Land Use/Land Cover	Grass
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 72 – (9.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel includes Little River Boat Ramp developed and managed by TVA. Bank fishing also occurs on this parcel. U.S. Highway 129 provides access to the area. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-72. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee
TVA D−Stage Map Numbers	37
Stream Mile and Bank	Little River Mile 3.7L

Parcel 73 – (2.5 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the left descending bank of the Little River and contains a portion of the road ROW for U.S. Highway 129. The intent of this parcel is to support the road ROW. The road itself has a low probability for the presence of cultural resources. Request for private water use facilities will not be considered.

Table 4-73. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	147−SW
TVA D-Stage Map Numbers	37
Stream Mile and Bank	Little River Mile 3.8L
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to the Tennessee Department of Transportation for a roadway • Revocable license to the City of Alcoa Utilities for utilities
Potential Projects	None identified
Potential Partners	• Tennessee Department of Transportation • City of Alcoa Utilities

Parcel 74 – (0.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River on the Little River embayment. This parcel fronts River Trace Subdivision and lies entirely below the 820-foot msl contour. The current land cover is a mix of lawn and deciduous forest. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities will be considered.

Table 4-74. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	147–SW
TVA D-Stage Map Numbers	37
Stream Mile and Bank	Tennessee River Mile 635.5L
Land Use/Land Cover	Mix of lawn and deciduous forest
Fronts Former TVA Tract (s)	XFL-31
Structure Profile	820–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 75 – (23.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This large parcel is located along the left descending bank of the Little River and contains a small portion of the road ROW for SR-133. This parcel is known as Singleton Harbor and contains TVA administrative buildings and storage facilities. The intent of this parcel is to support TVA operations and the road ROW. This parcel has a medium to high probability for the presence of cultural resources. Only a portion of this parcel has been surveyed for cultural resources. Request for private water use facilities will not be considered.

Table 4-75. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	147–SW
TVA D-Stage Map Numbers	31 and 37
Stream Mile and Bank	Little River Mile 1.2L
Land Use/Land Cover	Road right-o- way

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Blount County, Tennessee for a roadway
Potential Projects	Survey for cultural resources
Potential Partners	Blount County, Tennessee

Parcel 76 – (4.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel includes two small noncontiguous tracts of land located along the Polecat Branch embayment. This recreation area, locally known as Singleton, includes TVA-developed boat-launching ramp located along the right descending bank of the embayment. Along the left descending bank of the embayment, Blount County has developed picnic tables and fishing piers. The parcel is managed by Blount County under a revocable license agreement. Topside Road provides access to both portions of this parcel. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation will be considered.

Table 4-76. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee
TVA D−Stage Map Numbers	37
Stream Mile and Bank	Little River Mile 1.3L

Parcel 77 – (0.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This small parcel is located along both banks of Polecat Branch and contains a portion of the road ROW for SR-133. The intent of this parcel is to support the road ROW. The road itself has a low probability for the presence of cultural resources. Request for private water use facilities will not be considered.

Table 4-77. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	147–SW
TVA D-Stage Map Numbers	31
Stream Mile and Bank	Little River Mile 3.8B
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Blount County, Tennessee for roadway
Potential Projects	None identified
Potential Partners	Blount County, Tennessee

Parcel 78 – (0.4 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is located along the right descending bank of Polecat Branch and is adjacent to former TVA property (Tract No. XFL-133). The backlying property owner is S&ME engineering. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support industrial purposes will be considered.

Table 4-78. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	147–SW
TVA D-Stage Map Numbers	31
Stream Mile and Bank	Polecat Branch Mile 0.4R
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified

Parcel 79 – (19.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This relatively large parcel is located at the mouth of Polecat Creek, also known as the Singleton Area. Dense hardwood/pine stands cover this parcel. No federally or state-listed species are known to exist on this parcel. There is a medium to high probability for the presence

of cultural resources; however, a survey for historical properties has not been conducted. Requests for water use facilities will not be considered.

Table 4-79. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	147-SW
TVA D-Stage Map Numbers	37
Stream Mile and Bank	Little River Mile 1.1L
Land Use/Land Cover	Pines and hardwoods
Known Dispersed Recreation Opportunities	Hiking and bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for archaeological sites and historic structures
Potential Partners	None identified

Parcel 80 – (1.5 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is identified as having a need for management of sensitive resources due to the presence of a historic cemetery. It is totally encompassed by Plan Tract No. XFL-79PT and has no shoreline footage. No federally or state-listed species are known to be present on this parcel. Although no survey for historical properties has been conducted, there is a high probability for the presence of cultural resources. Requests for water use facilities will not be considered.

Table 4-80. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	147-SW
TVA D-Stage Map Numbers	37
Stream Mile and Bank	Little River Mile 1.1L
Land Use/Land Cover	Maintained cemetery
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 81 – (9.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three noncontiguous tracts of land located along the left descending bank of Tennessee River. The current land cover is deciduous forest. One bald eagle nest is known on this parcel; the activity status has not been surveyed in recent years. This parcel has a medium to high probability for the presence of cultural resources; however, only a portion of the parcel has been surveyed. Water use facilities have not been constructed along the shoreline, and future requests for private water use facilities will be considered.

Table 4-81. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	147–NW
TVA D-Stage Map Numbers	33
Stream Mile and Bank	Tennessee River Mile 634.6R
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XFL-87 and XTFL-13
Structure Profile	Varies
Current Agreements/Commitments	• Environmental assessment previously completed • No approved water use facilities

Parcel 82 – (21.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This very steep parcel is heavily forested by hardwoods and has at least one known dispersed recreation site. The backlying property is residential. This tract was formerly leased to Blount County, Tennessee (Tract No. XTFL-24L); however, Blount County did not express an interest in the future of the property. This parcel has no legal road access. No federally or state-listed species are known to exist on this parcel, yet one cave that has not been surveyed recently for listed species does occur on this parcel. There is a medium probability for the presence of cultural resources on this tract; however, a historic properties survey has not been conducted. Requests for water use facilities will not be considered.

Table 4-82. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SE
TVA D-Stage Map Numbers	33
Stream Mile and Bank	Tennessee River Mile 633.4 to 633.7L
Land Use/Land Cover	Hardwoods
Known Dispersed Recreation Opportunities	Informal hiking, camping, and bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for archaeological sites and historic structures
Potential Partners	None identified

Parcel 83 – (0.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River. This parcel lies entirely below the 820-foot msl contour, and the current land cover is upland hardwood forest. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. A water use facility has been constructed along the shoreline, and future requests for private water use facilities will be considered.

Table 4-83. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SE
TVA D-Stage Map Numbers	33
Stream Mile and Bank	Tennessee River Mile 631.4L
Land Use/Land Cover	Upland hardwood forest
Fronts Former TVA Tract (s)	XFL-86
Structure Profile	820–foot mean sea level
Current Agreements/Commitments	Approved water use facility

Parcel 84 – (9.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel was transferred to the State of Tennessee; then, the State of Tennessee transferred it back to TVA in 1971. It is a linear, narrow strip of property along the shoreline. A section of the shoreline was critically eroding at a previous time; however, it has since been stabilized with riprap. The land behind the stabilized shoreline is virtually barren with little to no tree cover and is residential in nature. The remainder of this parcel is very steep and is covered by a dense mix of hardwoods and pines. The backlying property of this area has largely remained forested; however, some backlying property has been cleared for residential development. There is no legal road access to this parcel. No federally or state-listed species are known to exist. A portion of this parcel has a medium probability for the presence of cultural resources. Other portions, due to steep grade, have a low probability for the presence of cultural resources. The parcel has not been surveyed for historic properties. Requests for water use facilities will not be considered.

Table 4-84. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SE
TVA D-Stage Map Numbers	33
Stream Mile and Bank	Tennessee River Mile 630.9 to 631.4R
Land Use/Land Cover	Bare, pines, and hardwoods
Known Dispersed Recreation Opportunities	Hiking
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for archaeological sites and historic structures
Potential Partners	None identified

Parcel 85 – (3.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel borders former TVA property (Tract No. XTFL-11) that was transferred to the State of Tennessee for public recreation. A boat-launching ramp has been developed on the

parcel. Topside Road provides access to the area. Undeveloped portions of this parcel have a medium to high probability for the presence of cultural resources. This parcel has not been survey for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-85. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee
TVA D−Stage Map Numbers	31
Stream Mile and Bank	Tennessee River Mile 629.7L

Parcel 86 – (1.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This small parcel is located along both banks of George Creek and contains a portion of the road ROW for SR-333. The intent of this parcel is to support the road ROW. The road itself has a low probability for the presence of cultural resources. There is a portion of this parcel, however, that has a high probability for the presence of cultural resources, but has not been surveyed. Requests for private water use facilities will not be considered.

Table 4-86. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SE
TVA D-Stage Map Numbers	31
Stream Mile and Bank	George Creek Mile 0.5B
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	Tennessee Department of Transportation

Parcel 87 – (0.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River on the George Creek embayment. This parcel lies entirely below the 820-foot msl contour, and the current land cover is upland hardwood forest. This parcel has a medium probability for the presence of

cultural resources, but it has not been surveyed. No water use facilities have been constructed along the shoreline, but future requests for private water use facilities will be considered.

Table 4-87. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SE
TVA D-Stage Map Numbers	31
Stream Mile and Bank	George Creek, River Mile 0.5L
Land Use/Land Cover	Upland hardwood forest
Fronts Former TVA Tract (s)	XFL-84
Structure Profile	820-foot mean sea level
Current Agreements/Commitments	No approved water use facilities

---

Parcel 88 – (1.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the left descending bank of the Tennessee River. The intent of this parcel is to provide a navigational safety harbor. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Request for private water use facilities will not be considered.

Table 4-88. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SE
TVA D-Stage Map Numbers	27
Stream Mile and Bank	Tennessee River Mile 629.1L
Land Use/Land Cover	Upland Hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Survey for cultural resources
Potential Partners	None identified

Parcel 89 – (2.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel borders former TVA property (Tract No. XTFL-10) that was transferred to the State of Tennessee for public recreation. The site is undeveloped and does not currently

have legal access. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-89. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee
TVA D−Stage Map Numbers	27
Stream Mile and Bank	Tennessee River Mile 629L

Parcel 90 – (2.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of a narrow, linear shoreline section and an island. Although five water use facilities exist fronting the shoreline portion of this parcel, only one permit for a water use facility has been issued. In addition, the parcel has numerous violations and/or encroachments present, such as retaining walls and driveways. The backlying property is residential. There are few hardwoods on this parcel; most of the ground is bare. No federally or state-listed species are known to exist on this parcel, however there is a heronry known to be present on the island. There is a medium probability for the presence of cultural resources on this tract. The parcel has not been surveyed for historic properties. Future requests for water use facilities will not be considered.

Table 4-90. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SE
TVA D-Stage Map Numbers	27
Stream Mile and Bank	Tennessee River Mile 629L
Land Use/Land Cover	Bare ground
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 91 – (7.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River. This parcel lies entirely below the 820-foot msl contour, and the current land cover is a mixture of maintained lawn and upland forest. This parcel has a high probability for the presence of cultural resources. A portion of this parcel has been surveyed, but most has not been adequately surveyed for cultural resources. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities will be considered.

Table 4-91. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SE
TVA D-Stage Map Numbers	27
Stream Mile and Bank	Tennessee River Mile 625.5L
Land Use/Land Cover	Maintained lawn and upland forest
Fronts Former TVA Tract (s)	XFL-70, XFL-71, XFL-72, XFL-73, XFL-75, XFL-76, XFL-78, XFL-79, XFL-80, XFL-81, XF-82
Structure Profile	820–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 92 – (24.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

Parcel 92 is a compilation of three noncontiguous tracts of land: one at the mouth of Lackey Creek, one in the middle of the Lackey Creek cove, and one in the back of the cove. The tract located at the mouth of Lackey Creek is covered by a dense mixture of hardwoods and pines. A telephone line crosses through the center of this parcel. The tract located in the middle length of the cove is also forested with pines and hardwoods and houses at least one known highly used dispersed recreation site.

The tract in the back of the cove is covered with pines and hardwoods. TVA acquired this tract in exchange for land rights granted by a private recreation easement (Tract No. XFL-132RE) in Poland Creek. One portion of this parcel has a high probability for the presence of cultural resources and has been surveyed. The other portions of this parcel have a medium probability for the presence of cultural resources and have not been surveyed. Requests for private water use facilities will not be considered.

Table 4-92. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SE
TVA D-Stage Map Numbers	25, 25-1, and 27
Stream Mile and Bank	Lackey Creek Miles 0 to 0.7R
Land Use/Land Cover	Hardwoods and pines
Known Dispersed Recreation Opportunities	Informal camping and bank fishing
Current Agreements/Commitments	None identified

Parcel 93 – (0.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is managed via a revocable license for commercial recreation and is managed as a part of Louisville Landing Marina. Amenities at this area include wet and dry boat storage accommodations, fuel and repair services, and a restaurant. This marina is located off Louisville Road. This parcel has a low probability for the presence of undisturbed cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-93. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee
TVA D−Stage Map Numbers	25
Stream Mile and Bank	Tennessee River Mile 625.4L

Parcel 94 – (4.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of three islands in addition to a shoreline section. The dominant ground cover is hardwood and pine forest. This parcel is located in Lackey Creek and offers a shoreline buffer to P.J.'s Marina.

The shoreline section of this parcel is located adjacent to SR-333. No federally or state-listed species are known to exist on this parcel. Portions of this parcel have a high probability for the presence of cultural resources. Other parts of this parcel have a medium to low probability for the presence of cultural resources. None of this parcel has been surveyed for historic properties. Requests for private water use facilities will not be considered.

Table 4-94. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SE
TVA D-Stage Map Numbers	25, 25-1, and 25-2
Stream Mile and Bank	Lackey Creek Miles 0.4 to 0.9L
Land Use/Land Cover	Hardwood and pine
Known Dispersed Recreation Opportunities	Informal camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 95 – (0.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the left descending bank of Lackey Creek and contains a portion of the road ROW for SR-333. The intent of this parcel is to support the road ROW and an existing utility easement. The road itself has a low probability for the presence of cultural resources. Request for private water use facilities will not be considered.

Table 4-95. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SE
TVA D-Stage Map Numbers	25 and 25-2
Stream Mile and Bank	Lackey Creek Mile 0.5L
Land Use/Land Cover	Road ROW
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Knoxville Power Company for utilities
Potential Projects	None identified
Potential Partners	Knoxville Power Company

Parcel 96 – (1.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This is located along the left descending bank of the Tennessee River in the Lackey Creek embayment. This parcel lies entirely below the 820-foot msl contour, and the current land cover is a mixture of maintained lawn and upland forest. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. No water use facilities have been constructed along the shoreline, but future requests for private water use facilities will be considered.

Table 4-96. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SE
TVA D-Stage Map Numbers	25
Stream Mile and Bank	• Tennessee River Mile 625.5L • Lackey Creek embayment
Land Use/Land Cover	Maintained lawn and upland forest
Fronts Former TVA Tract (s)	XFL-74
Structure Profile	820–foot mean sea level
Current Agreements/Commitments	No approved water use facilities

---

Parcel 97 – (1.6 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is located along the left descending bank of Lackey Creek and contains a portion of a railroad ROW. This parcel is managed via a revocable license agreement to Allison Boat Company. The intent of this parcel is to support industrial land use and the railroad ROW. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support industrial purposes will be considered.

Table 4-97. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SE
TVA D-Stage Map Numbers	25-2
Stream Mile and Bank	Lackey Creek Mile 0.4L
Land Use/Land Cover	Maintained lawn and railroad right-of-way

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent Easement to L and N Railroad Company for a railroad • Revocable License to Darris Allison for a commercial parking lot

Parcel 98 – (9.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River in the Lackey Creek embayment. This parcel is owned to a straight line boundary. The current land cover is maintained lawn and deciduous forest. This parcel has a medium to high probability for the presence of cultural resources. Some portions this parcel have been surveyed for cultural resources, but most have not. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities will be considered.

Table 4-98. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SE
TVA D-Stage Map Numbers	25
Stream Mile and Bank	• Tennessee River Mile 625.5L • Lackey Creek embayment
Land Use/Land Cover	Maintained lawn and deciduous forest
Fronts Former TVA Tract (s)	None
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 99 – (18.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel has been developed for public recreation by Blount County via a term easement agreement. Louisville Point Park amenities include a boat-launching ramp, picnic area, swimming beach, and restroom. The park is accessible by Louisville Road. Undisturbed portions of this parcel have a medium probability for the presence of cultural resources. One heronry record occurs on this parcel. Requests for use of TVA lands and associated water-based structures for developed recreation purposes will be considered.

Table 4-99. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee
TVA D−Stage Map Numbers	25
Stream Mile and Bank	Tennessee River Mile 625.4L

Parcel 100 – (0.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River. This parcel lies entirely below the 815-foot msl contour, and the current land cover is upland hardwood. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities will be considered.

Table 4-100. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SE
TVA D-Stage Map Numbers	25
Stream Mile and Bank	Tennessee River Mile 625.1L
Land Use/Land Cover	Upland hardwood
Fronts Former TVA Tract (s)	XFL-68
Structure Profile	820–foot mean sea level
Current Agreements/Commitments	No approved water use facilities

---

Parcel 101 – (11.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel includes a shoreline strip that borders former TVA property (Tract No. XTFL-8) that was transferred to the State of Tennessee. This parcel also includes an area managed by the State of Tennessee via a term easement agreement (Tract No. XTFL-133E).

A boat-launching ramp and parking lot have been developed on the transferred property. The easement area is currently undeveloped. Lowes Ferry Road provides access to the parcel. This parcel has a medium probability for the presence of cultural resources. Only a portion of this parcel has been surveyed for cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-101. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee
TVA D−Stage Map Numbers	22
Stream Mile and Bank	Tennessee River Mile 622.7L

Parcel 102 – (2.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel in located along both banks of Gillespie Creek and contains a portion of the road ROW for Lowes Ferry Road. The intent of this parcel is to support the road ROW. The road itself has a low probability for the presence of cultural resources. This parcel is adjacent to parcels with higher probability for the presence of cultural resources. Request for private water use facilities will not be considered.

Table 4-102. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SE
TVA D-Stage Map Numbers	25 and 25-2
Stream Mile and Bank	Gillespie Creek Mile 1B
Land Use/Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license to Fort Loudoun Electric Cooperative for utilities
Potential Projects	None identified
Potential Partners	Fort Loudoun Electric Cooperative

Parcel 103 – (13.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

TVA originally developed this parcel for public recreation. The facility is known as Poland Creek Recreation Area. The Town of Louisville via a revocable license agreement currently operates the area. Amenities include a boat-launching ramp, campground, picnic tables, and restrooms. Lowes Ferry Road provides access to the area. This parcel has a low probability for the presence of undisturbed cultural resources, but it has not been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-103. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee
TVA D−Stage Map Numbers	13
Stream Mile and Bank	Tennessee River Mile 620.2L
Potential Projects	Survey for historic properties

Parcel 104 – (3.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel lies in the back of the cove of Poland Creek; is immediately adjacent to Poland Creek Campground; and fronts Holston College Road. The land cover is mostly bare ground, except the shoreline, which is lined with pines and hardwoods. The northernmost portion of this tract previously had an agricultural license for hay; however, that license is now expired. A telephone line exists through the middle part of the old agricultural license area. A transmission line crosses this parcel near the back of the cove near where Lowes Ferry Road bisects the parcel. No federally or state-listed species are known to exist on this parcel. There is a medium probability for the presence of cultural resources on this tract; however, a survey for historic properties has not been conducted. Requests for water use facilities will not be considered.

Table 4-104. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SE
TVA D-Stage Map Numbers	13
Stream Mile and Bank	Poland Creek Miles 0.7 to 1L
Land Use/Land Cover	Bare, pine, and hardwood
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 105 – (5.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River. This parcel fronts Riverbrook Subdivision and is encumbered by a noncommercial, nonexclusive recreation easement (Tract No. XFL-132RE). The current land cover is maintained laws. This parcel has a low probability for the presence of cultural resources, but it has not been adequately surveyed. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities will be considered.

Table 4-105. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Loudon, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SE
TVA D-Stage Map Numbers	25
Stream Mile and Bank	Tennessee River Mile 612.0L
Land Use/Land Cover	Maintained lawn
Fronts Former TVA Tract (s)	None identified
Structure Profile	Varies
Current Agreements/Commitments	• Approved water use facilities • noncommercial, nonexclusive recreation easement

---

Parcel 106 – (17.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located at the mouth of Poland Creek. The entire parcel was once under an agricultural license for hay; however, that license is now expired. A portion of the parcel was actively managed for hay, and the vegetation is now reverting to natural growth vegetation. The other portion of the parcel was not actively managed, and this area is now covered by mature hardwoods and pines. Holston Harbor and Riverbrook subdivisions, as well as a cemetery, occupy the backlying property. The shoreline of this parcel has been stabilized with rock. Legal road access to the parcel does not exist. No federally or state-listed species are known to exist on this parcel. There is a high probability for the presence of cultural resources. The parcel has not been surveyed for historic properties. Requests for water use facilities will not be considered.

Table 4-106. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SE
TVA D-Stage Map Numbers	13
Stream Mile and Bank	Tennessee River Mile 620L
Land Use/Land Cover	Hardwood and pine
Known Dispersed Recreation Opportunities	Birding, informal camping, hiking, and bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 107 – (29.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is currently undeveloped. The tract has gentle slopes, some forest cover, and is located in a developing residential area. These factors make the site valuable for meeting future recreation needs. The parcel is located off Gravelly Hills Road but legal access to the site has not been confirmed. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structure to support developed recreation purposes will be considered.

Table 4-107. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee
TVA D−Stage Map Numbers	14
Stream Mile and Bank	Tennessee River Mile 618L
Potential Projects	Survey for historic properties

Parcel 108 – (17.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel was formerly leased to Blount County. The property is very steep and is densely covered with a mixture of hardwood and pine forest. The backlying property is occupied by Lake Meadow Estates subdivision. Legal road access to this tract does not exist. No federally or

state-listed species are known to exist on this parcel. There is a medium to high probability for the presence of cultural resources on this tract. This parcel has not been surveyed. One 26a permit exists on this parcel for dock; however, requests for water use facilities will not be considered.

Table 4-108. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SW
TVA D-Stage Map Numbers	13 and 14
Stream Mile and Bank	Tennessee River Miles 614.4 to 614.8R
Land Use/Land Cover	Hardwoods and pines
Known Dispersed Recreation Opportunities	Informal camping, hiking, and bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 109 – (1.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River. The parcel fronts Choto Hills Subdivision. This parcel lies entirely below the 820-foot msl contour, and the current land cover is maintained lawn and deciduous forest. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities will be considered.

Table 4-109. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SW
TVA D-Stage Map Numbers	12
Stream Mile and Bank	Tennessee River Mile 613.3L
Land Use/Land Cover	Maintained lawns and deciduous forest
Fronts Former TVA Tract (s)	XFL-54

Location Component and Public Involvement Opportunities	Parcel Specific Information
Structure Profile	820–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 110 – (2.8 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small island is located near the right bank of the Tennessee River downstream and fronts Chota Hills subdivision. Pines and hardwoods cover the majority of the island; however, a few areas are bare due to extensive informal recreational use. No federally or state-listed species are known to occur; however, a heronry record is known from this island. There is a high probability for the presence of cultural resources but a survey for historic properties has not yet been conducted on the island. Requests for private water use facilities will not be considered.

Table 4-110. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SW
TVA D-Stage Map Numbers	12
Stream Mile and Bank	Tennessee River Mile 613L
Land Use/Land Cover	Pines and hardwoods
Known Dispersed Recreation Opportunities	Informal camping and bank fishing
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 111 – (76.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

TVA has developed Ish Creek Boat Ramp on a portion of this large parcel. The size of this parcel and physical characteristics such as moderate topography, good forest cover, and protected waters make it suitable for a variety of developed recreation uses. Access to this site is off Wonderland Drive. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support recreation development purposes will be considered.

Table 4-111. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee
TVA D−Stage Map Numbers	11
Stream Mile and Bank	Tennessee River Mile 612L
Potential Projects	Survey for historic properties

Parcel 112 – (134.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of an island and a peninsula and is located in the Ish Creek Embayment. The island, known as Ish Creek Island, is likely the most heavily used area on the reservoir for informal camping on TVA lands. At least seven informal camping sites are present on the island. Boat access to the island is fairly easy due to water depth. The northern section of the island is largely covered by pines; however, the remainder of the island is an old field that is reverting to forests. The peninsula portion of this parcel is known as Marmor. Marmor is also heavily used for informal recreation on the reservoir; however, shallow water on the west side of the peninsula precludes some users from accessing the site. Many informal users are attracted to recreate at Marmor around the existing pond. Numerous informal camping sites exist on the Marmor peninsula, which is densely covered with hardwoods and pines. No federally or state-listed species are known to exist. This parcel has a high probability for the presence of cultural resources. A portion of this parcel has been surveyed, but most has not. Requests for water use facilities will not be considered.

Table 4-112. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Blount, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SW and 138-SE
TVA D-Stage Map Numbers	9 and 11
Stream Mile and Bank	Ish Creek Miles 0.4 to 1.6L
Land Use/Land Cover	Hardwoods and pines
Known Dispersed Recreation Opportunities	Informal camping, hiking, and bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 113 – (2.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

The northern (downstream) portion of this shoreline parcel borders former TVA property (Tract No. XTFL-7) that was transferred to the State of Tennessee for public recreation. The State of Tennessee has developed a boat-launching ramp and parking lot at this location. Cedar Crest Lane provides access to the facility. The upstream section of the parcel, starting at TVA marker 7-7, fronts Tract No. XFL-33 sold for commercial recreation. This part of the parcel is managed as a part of Whispering Cove Marina. Marina amenities include wet and dry boat storage, fuel, boat repair, and a boat-launching ramp. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-113. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee
TVA D−Stage Map Numbers	7 and 11
Stream Mile and Bank	Tennessee River Mile 612L

Parcel 114 – (4.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel borders former TVA property (Tract No. XTFL-6) that was transferred to the State of Tennessee for public recreation. The State of Tennessee has developed a boat-launching ramp and parking lot at this location. Parks Ferry Road provides access to the area. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-114. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee
TVA D−Stage Map Numbers	9
Stream Mile and Bank	Tennessee River Mile 610L

Parcel 115 – (1.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel borders a former TVA property (Tract No. XTFL-4) that was transferred to the State of Tennessee for public recreation. The site is currently undeveloped. The topography and shoreline characteristics make this area suitable for recreation development, but there is no legal road access to the property. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support recreation development purposes will be considered.

Table 4-115. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee
TVA D−Stage Map Numbers	7
Stream Mile and Bank	Tennessee River Mile 607.5L

Parcel 116 – (5.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel in located along the left descending bank of the Tennessee River. The intent of this parcel is to provide a navigational safety harbor. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Request for private water use facilities will not be considered.

Table 4-116. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Loudon, Tennessee
Topographic Map (Sheet No. and Quadrant)	138−SW
TVA D-Stage Map Numbers	6
Stream Mile and Bank	Tennessee River Mile 606.3L
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Survey for cultural resources
Potential Partners	None identified

Parcel 117 – (0.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three noncontiguous tracts of land located along the left descending bank of the Tennessee River in the Cloyd Creek Embayment. This parcel lies entirely below the 820-foot msl contour, and the current land cover is a mix of maintained lawn and deciduous forest. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities will be considered.

Table 4-117. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Loudon, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SW
TVA D-Stage Map Numbers	6
Stream Mile and Bank	Tennessee River Mile 606.6L
Land Use/Land Cover	Maintained lawn and deciduous forest
Fronts Former TVA Tract (s)	Varies
Structure Profile	820–foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 118 – (0.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel borders former TVA property (Tract No. XTFL-3) that was transferred to the State of Tennessee for public recreation. A boat-launching ramp and parking lot has been developed on the site. The area is located off Unitia Road. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-118. Parcel Information

Location Component	Parcel Specific Information
County, State	Loudon, Tennessee
TVA D−Stage Map Numbers	6
Stream Mile and Bank	Tennessee River Mile 606.5L

Parcel 119 – (0.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This small parcel in located along the right descending bank of Cloyd Creek and contains a portion of the road ROW for Unitia Road. This parcel has a low probability for the presence of undisturbed cultural resources. The intent of this parcel is to support the road ROW. Request for private water use facilities will not be considered.

Table 4-119. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Loudon, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SW
TVA D-Stage Map Numbers	6
Stream Mile and Bank	Cloyd Creek Mile 0.7R
Land Use/Land Cover	Road ROW
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 120 – (33.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is currently undeveloped. While the property's physical characteristics including steep topography constrain the level of potential development, the size and location of the property make it desirable for meeting future recreation needs in this area of the reservoir. The parcel is located nearest Camp Road, but this parcel does not have legal road access. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-120. Parcel Information

Location Component	Parcel Specific Information
County, State	Loudon, Tennessee
TVA D−Stage Map Numbers	6
Stream Mile and Bank	Tennessee River Mile 606.3L

Parcel 121 – (6.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of two noncontiguous tracts of located along the left descending bank of the Tennessee River. This parcel contains a portion of a transmission line ROW and a navigational safety harbor. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. Request for private water use facilities will not be considered.

Table 4-121. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Loudon, Tennessee
Topographic Map (Sheet No. and Quadrant)	138–SW
TVA D-Stage Map Numbers	6
Stream Mile and Bank	Tennessee River Mile 606.5L
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Survey for cultural resources
Potential Partners	None identified

Parcel 122 – (28.6acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel was initially developed and operated by TVA as Yarberry Peninsula Recreation Area, and is now operated via a commercial recreation lease agreement. Amenities at this area include a campground, boat-launching ramp, swimming beach, and picnic tables. Yarberry Drive provides access to the area. This parcel has a high probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-122. Parcel Information

Location Component	Parcel Specific Information
County, State	Loudon, Tennessee
TVA D−Stage Map Numbers	2
Stream Mile and Bank	Tennessee River Mile 604.5L

Parcel 123 – (0.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel lies between two sections of the Fort Loudoun Estates subdivision, adjacent to Sandy Shores Drive. It is a small parcel covered with mature hardwoods. No federally or state-listed species are known to exist on this parcel. This parcel has a medium probability for the presence of cultural resources, but the parcel has not been surveyed for historic properties. Requests for water use facilities will not be considered.

Table 4-123. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Loudon, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SW
TVA D-Stage Map Numbers	2
Stream Mile and Bank	Tennessee River Mile 603.6L
Land Use/Land Cover	Hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 124 – (7.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River. The parcel fronts Fort Loudoun Estates 2 Subdivision. This parcel includes a sale tract to a contour and a straight line boundary section. The current land cover is maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities will be considered.

Table 4-124. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Loudon, Tennessee
Topographic Map (Sheet No. and Quadrant)	138-SW
TVA D-Stage Map Numbers	2
Stream Mile and Bank	Tennessee River Mile 603.5L
Land Use/Land Cover	Maintained lawns
Fronts Former TVA Tract (s)	Varies
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 125 – (10.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel provides access to the Little River and is jointly managed by TVA and TWRA. Improvements include a gravel parking lot and paddle boat put-in area. U.S. Highway 321 provides access to the area. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes will be considered.

Table 4-125. Parcel Information

Location Component	Parcel Specific Information
County, State	Blount, Tennessee
TVA D−Stage Map Numbers	NA
Stream Mile and Bank	Little River Mile 22L

This page intentionally left blank

CHAPTER 5. PLANNING TEAM

Chellye L. Campbell
Position: Senior Specialist, Land Policy
Education: B.S. Biology
Experience: 15 years in Planning and Managing Land
Involvement: Deed interpretation and Land Policy guidance

Garry E. Chappelle
Position: Program Manager, Natural Resource Management
Education:
Experience: 17 years in GIS Mapping and 15 years in Land Management
Involvement: Planning Team and Natural Resource Management

Keri J. Chartrand
Position: Specialist, Recreation Agreements
Education:
Experience:
Involvement: Planning Team and Recreation Management

Jerry G. Fouse
Position: Recreation Specialist
Education: M.B.A., B.S., Forestry and Wildlife
Experience: 39 years in Natural Resources – Recreation Planning and Economic Development
Involvement: Planning Team and Recreation Management

Thomas O. Maher
Position: Senior Archaeologist
Education: Ph.D. Anthropology
Experience: 33 years in the field of Archaeology
Involvement: Planning Team and Cultural Resource Management

Leonard L. McCurdy, Jr.
Position: Senior Specialist, Reservoir Land Use and Permitting
Education: J.D., Law; B.S., Environmental Studies - Chemistry
Experience: 26 years in the field of Law including 19 years in TVA real property rights
Involvement: Deed interpretation and Land Policy guidance

Robert A. Marker
Position: Senior Specialist, Recreation
Education: B.S., Outdoor Recreation Resources Management
Experience: 44 years in Recreation Resources Planning and Management
Involvement: Planning Team and Recreation Management

Heather L. Montgomery

Position:	Senior Program Manager, Reservoir Land Planning
Education:	B.S., Environmental Biology
Experience:	15 years in Planning and Managing Land and Environmental Impacts Evaluation
Involvement:	Program Manager

Mark T. Morrissey

Position:	Geographic Analyst
Education:	B.S., Geography
Experience:	2 years in Planning and Managing Land; 5 years in Industrial Safety and Compliance
Involvement:	Document Preparation; Planning Team; and Preparation of Geographic information Systems

Angela M. Sutton

Position:	Watershed Representative
Education:	M.S., Geology; B.S., Geology and Biology
Involvement:	Planning Team and Natural Resource Management

Debra L. Rutherford

Position:	Program Manager, Reservoir Land Use and Permitting
Involvement:	Planning Team and Deed interpretation

Karen E. Rylant

Position:	Senior Specialist, Section 26a Policy and Process
Education:	Ph.D., Agronomy (Soil Chemistry); M.S., Soil Fertility; B.A., Chemistry, B.A., Geology
Experience:	8 years in Environmental Research; 4 years in Land and Shoreline Management
Involvement:	Deed interpretation and Section 26a guidance

CHAPTER 6. LITERATURE CITED

Ahlman, M. Todd, Susan R. Frankenburg, and Nicholas P. Herrmann 2000. Archaeological Reconnaissance Survey of Tennessee Valley Authority Lands on Watts Bar Reservoir. Report on File at the Tennessee Valley Authority Cultural Resources Library in Knoxville, Tennessee.

Benson, A.J., D. Raikow, J. Larson, A. Fusaro, and A.K. Bogdanoff. 2016. Dreissena polymorpha. USGS Nonindigenous Aquatic Species Database, Gainesville, Florida. Retrieved from https://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=5 (accessed October 2016).

Chapman, Jefferson. 1985. Tellico Archaeology: 12,000 Years of Native American History. University of Tennessee Department of Anthropology Report of Investigation No. 43, and the Tennessee Valley Authority Publications in Anthropology No. 41. University of Tennessee, Knoxville.

Davis Jr., R. P.S. 1990. Aboriginal Settlement Patterns in the Little Tennessee River Valley. University of Tennessee Department of Anthropology Report of Investigation No. 50, and the Tennessee Valley Authority Publications in Anthropology No. 54. University of Tennessee, Knoxville.

EDDMapS. 2016. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Retrieved from http://www.eddmaps.org/ (accessed October 2016).Etnier, D. A. and W. C. Starnes. 1993. The Fishes of Tennessee. Knoxville: University of Tennessee Press.

Federal Register. 1999. Executive Order 13112 of February 3, 1999, Invasive Species, Federal Register, February 8, 1999/Presidential Documents.

Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. 19+ vols. New York and Oxford.

Gage, Matthew D. 2005. Archaeological Inventory of 30.9 Miles of Shoreline Along Wheeler, Guntersville, Fort Loudoun, and Norris Reservoirs in Alabama and Tennessee. Report on File at the Tennessee Valley Authority Cultural Resources Library in Knoxville, Tennessee.

Harrington, Mark R. 1922. Cherokee and Earlier Remains on Upper Tennessee River. Indian Notes and Monographs, Museum of the American Indian, Heye Foundation, New York.

Higgins, John M. and W. Gary Brock. 2009. Overview of Reservoir Release Improvements at 20 TVA Dams. Journal of Energy Engineering, Vol. 125, No. 1, April, 1999.

Hilty, John. 2015. Illinois Wildflowers. Retrieved from www.illinoiswildflowers.info (accessed July 2016).

Homer, C.G., Dewitz, J.A., Yang, L., Jin, S., Danielson, P., Xian, G., Coulston, J., Herold, N.D., Wickham, J.D., and Megown, K., 2015, Completion of the 2011 National Land Cover Database for the conterminous United States-Representing a decade of land cover

change information. Photogrammetric Engineering and Remote Sensing, v. 81, no. 5, p. 345-354.

Kimball, Larry R. 1985. The 1977 Archaeological Survey: An Overall Assessment of the Archaeological Resources of the Tellico Reservoir. University of Tennessee Department of Anthropology Report of Investigations No. 40, and the Tennessee Valley Authority Publications in Anthropology No. 39, University of Tennessee, Knoxville.

Ladybird Johnson Wildflower Center. 2013. Native Plant Information Network, NPIN. Lady Bird Johnson Wildflower Center at The University of Texas, Austin, TX. Retrieved from http://www.wildflower.org/plants/ (accessed July 2016).

McDonough, T. A. and G. D. Hickman. 1999. "Reservoir Fish Assemblage Index Development - A Tool for Assessing Ecological Health in Tennessee Valley Authority Impoundment," in Assessing the Sustainability and Biological Integrity of Water Resources Using Fish Communities, 523-540. Edited by T. Simon. Washington, D.C.: CRC Press.

Moore, Clarence B. 1915. Aboriginal Sites on the Tennessee River. Journal of the Academy of Natural Sciences of Philadelphia, second series 16(3).

NatureServe. 2016. NatureServe Web Service. Arlington, VA. U.S.A. Retrieved from http://services.natureserve.org (accessed July 2016).

Schroedl, Gerald F. 2009 "Overhill Cherokees." Electronic document. Retrieved from https://tennesseeencyclopedia.net/entry.php?rec=1026 (accessed August 2016).

TDEC. 2014. Tennessee Department of Environment and Conservation. TDEC Rare Species data viewer. Retrieved from https://tn.gov/environment/article/tdec-dataviewers (accessed July 2016).

———. 2016. Water Resources Data and Map Viewer web interface. Retrieved from https://www.tn.gov/environment/article/wr-water-resources-data-viewer (accessed August 2016).

Tennessee Exotic Pest Plant Council. 2009. Listing and Categorization of Invasive Exotic Plant Pests in Tennessee. Retrieved from http://www.tneppc.org/invasive_plants (accessed July 2016).

Tennessee Valley Authority. 1949. The Fort Loudoun Project. A comprehensive report of the planning, design, construction, and initial operations of the Fort Loudoun Project. Technical Report Number 11. Knoxville, Tennessee.

———. 1997. Fort Loudoun Reservoir Recreation Study, May 1, 1997.

———.1999. Shoreline Management Initiative: An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley Final Environmental Impact Statement. Retrieved from http://www.tva.gov/river/landandshore/landuse_shore.htm (accessed June 2016).

———. 2005. Tennessee Valley Authority Recreation Strategic Plan: A Framework for Providing Recreation Opportunities On and Along the Tennessee River 2004-2005.

———. 2011. Natural Resource Plan and associated Natural Resource Plan Final Environmental Impact Statement, Volumes 1 and 2. Retrieved from http://www.tva.com/environment/reports/nrp/index.htm (accessed June 2016).

———. 2015. Fort Loudoun Reservoir. Retrieved from http://www.tva.gov/sites/fortloudoun.htm (accessed September 2016).

———. 2016a. Tennessee Valley Authority Natural Heritage Database, Data Received 2016.

———. 2016b. Reservoir Health Ratings. Retrieved from https://www.tva.gov/Environment/Environmental-Stewardship/Water-Quality/Reservoir-Health-Ratings (accessed July 2016).

———. 2016c. Tennessee Valley Authority Reservoir Vital Signs Monitoring Program Fish Collections, Data Received 2016.

Tennessee Wildlife Resources Agency. 2016. Tennessee Watchable Wildlife Retrieved from www.tennesseewatchablewildlife.org (accessed July 2016).

U.S. Census Bureau. 2010a. USCB Population Division. Annual Estimates of the Resident Population: April 2010-July 1, 2015, UT Center for Business and Economic Research, 2003.

———. 2010b. American Fact Finder 2010-2014 American Community Survey, 5-year estimates. Retrieved from http://factfinder.census.gov/ (accessed July 2016).

———. 2015. Annual Estimates of the Resident Population: April 1, 2010-July 1, 2015. Retrieved from http://factfinder.census.gov/ (accessed July 2016).

USDA NRCS. 2016. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Retrieved from http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed July 2016).

U.S. Department of the Interior. 2008. Reclamation: Managing Water in the West; Resource Management Plan, Navajo Reservoir Area, Colorado and New Mexico, Final Environmental Assessment and Finding of No Significant Impact, June 2008.

U.S. Environmental Protection Agency. 2013. Level III ecoregions of the continental United States: Corvallis, Oregon, U.S. EPA– National Health and Environmental Effects Research Laboratory, map scale 1:7,500,000. Retrieved from https://archive.epa.gov/wed/ecoregions/web/html/level_iii_iv-2.html#Level III (accessed July 2016).

U.S. Fish and Wildlife Service. 2016a. IPaC Trust Resources Report. Information, Planning and Conservation System. Retrieved from https://ecos.fws.gov/ipac/ (accessed October 2016).

U.S. Fish and Wildlife Service. 2016b. National Wetlands Inventory Web site. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Retrieved from http://www.fws.gov/wetlands (accessed July 2016).

U.S. Geological Survey .2016. Land Cover Trends Project. Retrieved from http://landcovertrends.usgs.gov/main/ecoIndex.html (accessed July 2016)

GLOSSARY

acre	A unit measure of land area equal to 43,560 square feet
agricultural licensing	Some parcels or portions of parcels designated for other purposes or uses may also be suitable for interim agricultural licensing. These parcels have been identified using the criteria contained in TVA's agriculture instruction. Normal tenure for a TVA agricultural license is five years. Land with extreme erosion potential may not be licensed for agricultural use unless erosion and sediment controls, including the use of best management practices, can be successfully implemented. Further investigation and/or mitigation of adverse impacts to natural or cultural resources may be required prior to approval of license agreements.
cultural resources	Archaeological, historic, and architectural resources
dam reservation	Lands generally maintained in a park–like setting by TVA to protect the integrity of the dam structure, hydroelectric facilities, and navigation locks. The reservation also provides for public visitor access to the TVA dam facilities and recreation opportunities, such as public boat access, bank fishing, camping, picnicking, etc. Hunting is not typically allowed on dam reservations.
deciduous	Vegetation that sheds leaves in autumn and produces new leaves in the spring.
dispersed recreation	Recreation of an informal nature such as hunting, hiking, biking, bird watching, photography, primitive camping, bank fishing, and picnicking, etc. that occur on TVA land. These activities are not associated with developed facilities although some improvements may occur for access, health and safety, or to protect the environment.
embayment	A bay or arm of the reservoir
endangered species	A species in danger of extinction throughout all or a significant part of its range. Endangered species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.
Environmental Policy	A TVA Board–approved policy that communicates guiding principles to lead TVA successfully in the reduction of its environmental impact while continuing to provide reliable and competitively priced power to the Valley
floodplain	Any land area susceptible to inundation by water from any source by a flood of selected frequency. For purposes of the National Flood Insurance Program, the floodplain, as a minimum, is that area subject to one percent or greater chance of flooding (100–year flood) in any given year.
forest	Vegetation having tree crowns overlapping, generally forming 60 to100 percent cover.
Land Policy	A TVA Board–approved policy that guides retention, disposal, and planning interests in real property
mitigation	An action that either will result in avoidance or an effect or cause the results of an activity to be minor in significance
natural areas	Ecologically significant sites, lands set aside for particular management objectives, and lands that contain sensitive biological, cultural or scenic resources. The TVA natural area program includes small wild areas, habitat

	protection areas, wildlife observation areas, and ecological study areas.
plan tract	A numbered parcel of TVA fee–owned land.
prime farmland	Generally regarded as the best land for farming, these areas are flat or gently rolling and are usually susceptible to little or no soil erosion. Prime farmland produces the most food, feed, fiber, forage, and oil seed crops with the least amount of fuel, fertilizer, and labor. It combines favorable soil quality, growing season, and moisture supply and, under careful management, can be farmed continuously and at a high level of productivity without degrading either the environment or the resource base. Prime farmland does not include land already in or committed to urban development, roads, or water storage.
riparian	Related to or located on the banks of a river or stream
scrub–shrub	Woody vegetation less than about 20 feet tall. Species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions
shoreland	The surface of land lying between the minimum pool elevation of a TVA reservoir and the maximum shoreline contour or TVA back–lying property (whichever is further)
shoreline	The line where the water of a TVA reservoir meets the shore when the water level is at the normal summer pool elevation.
shoreline access rights	TVA land encumbered with deeded or implied rights held by adjacent property owners. The deeded or implied rights allow individuals to construct water use facilities upon receipt of TVA's written approval of plans.
threatened species	A species threatened with extinction throughout all or a significant portion of its range or territory. Threatened species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.
wetlands	As defined in TVA Environmental Review Procedures, "Wetlands are those areas inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances do or would support a prevalence of vegetation or aquatic life that requires saturated or seasonably saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, mud flats, and natural ponds.
wildlife management area	Land and/or water areas designated by state wildlife agencies, such as the Tennessee Wildlife Resources Agency, for the protection and management of wildlife. These areas typically have specific hunting and trapping regulations as well as rules regarding appropriate uses of these areas by the public.

INDEX

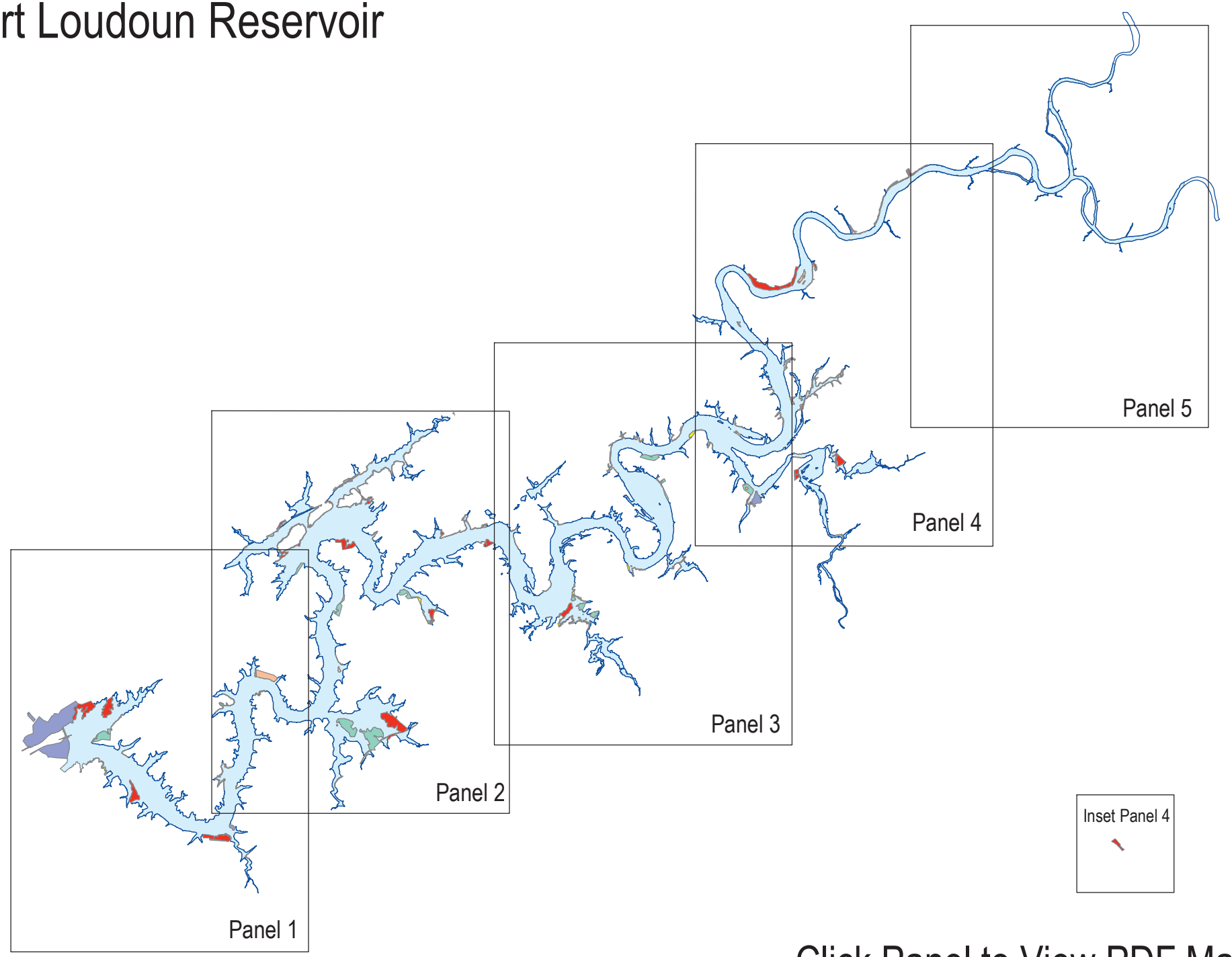
Advisory Council on Historic Preservation 38
Alabama 7, 137
aquatic ecology ..... i, 19, 22
archaeological resource 39, 48
area of potential effect ..... v, 38
back-lying land 56, 58
best management practice 141
Chickamauga 33
Committed land 52
Comprehensive Valleywide Land Plan ..... ii, v, 6, 47, 56, 57
cultural resource 38, 39, 53, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115,116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 141
deeded access 58
developed recreation . 6, 10, 11, 12, 30, 37, 42, 50, 54, 56, 57, 60, 61, 62, 64, 65, 66, 70, 72, 77, 79, 80, 82, 83, 85, 87, 88, 90, 91, 92, 93, 94, 95, 98, 99, 100, 101, 102, 104, 109, 110, 111, 112, 114, 118, 119, 120, 122, 125, 126, 127, 129, 130, 131, 132
dissolved oxygen 19, 33, 34
ecologically significant site 40, 141
endangered species ..... i, 22, 27, 28, 53, 141, 142
environmental impact statement ..... v, 1, 138, 139
Executive Order ..... v, 17, 44, 137
fish ..... ii, v, 19, 20, 21, 24, 31, 138, 139
flood 1, 8, 9, 34, 35, 36, 37, 39, 47, 141
floodplain 36, 37, 141
flowage easement 9, 47
Fort Loudoun..... i, ii, iii, 1, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 27, 28, 29, 30, 31, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 47, 52, 53, 54, 55, 56, 57, 59, 60, 61, 69, 79, 119, 131, 132, 137, 138, 139, 149, 151, 153
industrial 6, 9, 10, 22, 35, 37, 39, 40, 41, 42, 47, 50, 53, 54, 55, 57, 58, 73, 90, 92, 105, 116, 136
Kentucky 7, 14, 15
land use .i, ii, 3, 6, 9, 11, 35, 39, 40, 41, 42, 47, 48, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 63, 64, 65, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 78, 80, 81, 82, 84, 85, 86, 87, 88, 89, 90, 91, 92, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 121, 122, 123, 124, 126, 128, 129, 130, 131, 132, 135, 136, 149
maximum shoreline contour 86, 142
mitigation 141
mussel 22, 32
National Environmental Policy Act (NEPA) ..... v, 22, 40, 44, 47, 58
National Historic Preservation Act ..... v, 38, 39
National Park Service 15, 41
National Register of Historic Places ..... v, 38, 40, 48
natural area 41, 48, 49, 51, 53, 141
plant communities 18
prime farmland ..... i, ii, 9, 10, 11, 142
recreation ...i, ii, 5, 9, 10, 11, 12, 13, 30, 36, 45, 48, 49, 50, 51, 53, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88,

89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 135, 138, 141
Reservoir Land Management Plan1, ii, v, 1, 5, 6, 9, 10, 11, 12, 13, 22, 27, 36, 38, 39, 40, 42, 47, 52, 53, 54, 56, 57, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132
residential development 9, 41, 83, 84, 109
residential water use facilities 51
scoping 1
Section 106 of the National Historic Preservation Act 38
Section 26a of the TVA Act 9, 34, 47
sensitive resource 6, 10, 12, 30, 42, 45, 48, 49, 51, 52, 54, 55, 57, 58, 69, 86, 87, 89, 96, 106, 124
shoreline access 6, 9, 10, 30, 42, 45, 47, 51, 54, 56, 57, 58, 63, 68, 76, 77, 83, 95, 99, 103, 107, 108, 110, 113, 116, 117, 118, 121, 123, 128, 132, 142
Shoreline Management Initiative ..... v, 5, 9, 36, 47, 138
Shoreline Management Policy ..... i, v, 5, 10, 51, 58
socioeconomics ..... i, 43
speciesii, 14, 15, 16, 17, 18, 20, 21, 22, 23, 26, 27, 28, 29, 30, 31, 32, 35, 48, 49, 64, 67, 69, 70, 72, 75, 78, 80, 81, 86, 87, 89, 96, 97, 101, 105, 106, 107, 109, 112, 114, 120, 122, 123, 124, 125, 131, 137, 138, 141, 142
State Historic Preservation Officer ..... v, 39
tailwater 33
Tennessee1, i, ii, v, 1, 2, 7, 8, 9, 11, 12, 13, 17, 18, 23, 24, 25, 26, 27, 28, 29, 30, 32, 33, 37, 40, 43, 44, 45, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95,96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 137, 138, 139, 142
Tennessee Valley Authority 1, i, ii, iii, v, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 21, 22, 26, 27, 28, 29, 30, 31, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 44, 45, 47, 48, 49, 50, 51, 52, 53, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 135, 137, 138, 139, 141, 142, 149
terrestrial ecology ..... i, 13
threatened ..... i, 22, 26, 27, 28, 48, 53, 142
threatened species 22, 142
TVA Land Policy 58
U.S. Environmental Protection Agency 13, 139
U.S. Fish and Wildlife Service 14, 15, 16, 36, 48, 139
U.S. Forest Service 15
uncommitted land 52
visual resource ..... i, 6, 41
wetland ..... i, ii, 14, 16, 29, 30, 35, 36, 41, 48, 53, 55, 86, 139, 142
Wheeler 137
wildlife ii, v, 8, 12, 13, 15, 16, 18, 22, 27, 28, 29, 35, 36, 48, 49, 52, 55, 87, 88, 89, 135, 139, 142

Appendix A – Draft Land Management Plan Maps – Panels 1 through 5

This page intentionally left blank

Fort Loudoun Reservoir



Click Panel to View PDF Map

This page intentionally left blank

Appendix B – Comparison of Parcel Allocations by Alternative

This page intentionally left blank

APPENDIX B

Comparison of Parcel Allocations by Alternative

FORT LOUDOUN RESERVOIR

Of the 1,513.2 acres on Fort Loudoun Reservoir, there are no proposed allocation changes to 1,251.3 acres (82.7 percent); all proposed allocation changes involve 261.9 acres (17.3 percent). Of the 261.9 acres, TVA would allocate 102.6 acres (39.2 percent) to reflect existing land use agreements or commitments. The remaining 159.3 acres (60.8 percent) involve proposed parcel allocations that are not based on existing land use agreements or commitments.

[1]Some parcels are separated into smaller portions to show comprehensive consideration of some parcels. Portions of parcels are in bold text with a footnote.

See Tables below:
Table 1 = No Proposed Allocation Changes;
Table 2 = Changes Based on Existing Agreements or Commitments;
Table 3 = Changes NOT based on Existing Agreements or Commitments

Table 1. No Proposed Allocation Changes			
Number of Parcels Per Zone Allocation			
Zone 2	8	Zone 5	2
Zone 3	1	Zone 6	34
Zone 4	15	Zone 7	17

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
2	6	6	1.4
3	2	2	386.1
5	6	6	49.6
6	6	6	38.2
8	7	7	2.1
10	4	4	35.7
11	2	2	2.6
12	6	6	1.5
13	6	6	10.3
14	6	6	1.1
15	4	4	2.4
17	7	7	3.0
18	2	2	2.8
19	3	3	36.9
20[1]	4	4	7.8
21[1]	6	6	58.1
23[1]	4	4	4.9
24	6	6	4.9
26[1]	5	5	3.6
30	7	7	0.9
32	6	6	1.9
33	6	6	10.5
34	7	7	2.4
35[1]	6	6	1.3
45	2	2	2.0
46	6	6	4.7
48	6	6	69.1
50[1]	2	2	0.1
51	5	5	0.7
52	6	6	0.2
55	6	6	9.9
56	6	6	0.6
59	6	6	1.1

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
60	6	6	2.5
62	4	4	1.6
64	4	4	4.9
65	6	6	23.8
67	7	7	1.0
68	6	6	19.6
70	6	6	1.0
72	6	6	9.1
74	7	7	0.8
76	6	6	4.3
81	7	7	9.0
82	4	4	21.7
84	4	4	9.9
85	6	6	3.7
87	7	7	0.6
88	2	2	1.9
90	7	7	2.4
90a	4	4	0.3
91	7	7	7.0
92	4	4	24.3
94	4	4	0.7
96	7	7	1.4
98	7	7	9.2
99	6	6	18.6
100	7	7	0.5
103	6	6	13.2
104	4	4	3.8
105	7	7	5.2
106	4	4	17.2
107	6	6	29.1
108	4	4	17.9
109	7	7	1.7
111	6	6	76.8
112	4	4	53.2
113	6	6	2.4
114	6	6	4.1
116	2	2	5.1
117	7	7	0.4
118	6	6	0.6
120	6	6	33.5

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
121	2	2	2.9
122	6	6	28.6
124	6	6	10.9
124	7	7	7.3
Total = 77 Parcels or Portions of a Parcel		**Total = 1,251.3 Acres**	

[1]Denotes a portion of the parcel

Table 2. Changes Based on Existing Agreements or Commitments			
	No Action[1] Parcels	Proposed Allocation Parcels	
Zone 2	0	24	*6.8 Percent of Fort Loudoun Lands*
Zone 3	0	0	
Zone 4	5	7	
Zone 5	2	5	50 parcels 102.6 acres
Zone 6	12	11	
Zone 7	10	3	

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
1	6	2	0.8
4	Not Planned	2	7.8
7	Not Planned	6	0.3
9	Not Planned	6	0.2
16	4	2	0.5
21[1]	Not Planned	6	7.4
22	6	2	0.7
26[1]	7	5	0.4
26[1]	Not Planned	5	0.3
27	Not Planned	2	0.6
28[1]	7	4	1.3
29	5	2	0.3
31	7	2	0.3
35[1]	Not Planned	6	2.5
36	Not Planned	6	5.0
37	Not Planned	2	3.1
41	Not Planned	6	1.8
42	Not Planned	2	2.4
43	Not Planned	6	1.7
50[1]	Not Planned	2	3.5
61	6	7	2.3

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
66	6	2	1.3
69	6	2	1.3
71	7	4	0.3
73	6	2	2.5
75	5	2	23.0
77[1]	6	2	0.6
77[1]	Not Planned	2	0.0
78[1]	6	5	0.0
78[1]	Not Planned	5	0.4
83	4	7	0.2
86	6	2	1.3
89	4	6	2.0
93	7	6	0.1
94[1]	7	4	2.0
95	7	2	0.1
95	Not Planned	2	0.3
97	7	5	1.6
101	Not Planned	6	11.7
102[1]	4	2	0.3
102[1]	6	2	2.1
102[1]	Not Planned	2	0.4
115	4	6	1.2
119	6	2	0.2
121	6	2	3.7
123	7	4	0.7
34a	7	4	0.5
35a	Not Planned	4	0.8
41a	Not Planned	7	0.7
41b	Not Planned	4	0.3
Total = 50 Parcels or Portions of a Parcel		**Total = 102.6 Acres**	

[1]Denotes a portion of the parcel

Table 3. Changes NOT Based on Existing Agreements or Commitments			
	No Action Parcels	Proposed Allocation Parcels	
Zone 2	0	6	10.5 Percent of Fort Loudoun Lands
Zone 3	0	6	
Zone 4	7	9	
Zone 5	2	1	24 parcels 159.3 acres
Zone 6	7	2	
Zone 7	0	0	

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
20[1]	Not Planned	4	0.5
23[1]	Not Planned	4	0.8
25[1]	Not Planned	2	1.0
28[1]	5	4	1.2
38	Not Planned	4	0.5
39	Not Planned	2	0.1
40	Not Planned	6	6.8
44	4	3	2.7
47	4	3	1.7
49	4	3	8.7
53[1]	5	2	5.9
53[1]	6	2	7.4
54	6	5	3.5
57	4	6	4.1
58[1]	4	2	1.9
58[1]	6	2	0.5
62[1]	6	4	0.2
63	4	3	5.3
79	6	4	19.0
80	6	3	1.5
94[1]	Not Planned	4	0.0
94[1]	Not Planned	4	1.9
110	4	3	2.8
112	6	4	81.4
Total – 24 Parcels or Portions of a Parcel		**Total = 159.3 Acres**	

[1]Denotes a portion of the parcel

TENNESSEE VALLEY AUTHORITY

Multiple Reservoir Land Management Plans

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Volume IV
Great Falls Reservoir

December 2016

TVA

This page left blank intentionally

Document Type: EIS Administrative Record
Index Field: Draft EIS
Project Name: Multiple RLMPs & CVLP EIS
Project Number: 2016-2

GREAT FALLS RESERVOIR

Draft Reservoir Land Management Plan

VOLUME IV

MULTIPLE RESERVOIR LAND MANAGEMENT PLANS
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Prepared by
Tennessee Valley Authority

December 2016

This page intentionally left blank

Table of Contents

ACRONYMS AND ABBREVIATIONS ..... IV-III
CHAPTER 1. INTRODUCTION IV-1
1.1 Tennessee Valley Authority History IV-1
1.2 Overview of TVA's Vision and Environmental Policy IV-2
1.2.1 TVA's Mission IV-2
1.2.2 Environmental Policy IV-2
1.2.3 Land Policy IV-2
1.2.4 Shoreline Management Policy IV-3
1.3 The Natural Resource Plan IV-5
1.4 Purpose of Reservoir Land Planning IV-5
CHAPTER 2. REGIONAL OVERVIEW IV-7
2.1 History of Great Falls Dam IV-7
2.2 Great Falls Reservoir and Present Shoreline IV-8
2.2.1 Land Use and Prime Farmland IV-8
2.2.2 Recreation IV-9
2.2.3 Terrestrial Ecology IV-11
2.2.4 Aquatic Ecology IV-16
2.2.5 Threatened and Endangered Species IV-17
2.2.6 Water Quality IV-29
2.2.7 Wetlands IV-30
2.2.8 Floodplains IV-31
2.2.9 Air Quality IV-32
2.2.10 Cultural and Historic Resources IV-32
2.2.11 Natural Areas and Ecologically Significant Sites IV-35
2.2.12 Aesthetic and Visual Resources IV-35
2.2.13 Noise IV-36
2.2.14 Socioeconomics and Environmental Justice IV-36
2.3 The Future Management of Reservoir Lands IV-39
CHAPTER 3. LAND PLANNING PROCESS IV-41
3.1 Process for Planning Land IV-41
3.2 Great Falls Reservoir Goals and Objectives IV-46
3.3 Parcel Allocations IV-47
3.4 Property Administration IV-49
CHAPTER 4. PARCEL DESCRIPTIONS IV-51
CHAPTER 5. PLANNING TEAM IV-55

CHAPTER 6. LITERATURE CITED.....IV-57
GLOSSARY IV-59
INDEX IV-61

Appendices

Appendix A – Draft Land Management Plan Maps – Panel 1 ..... IV-63
Appendix B – Comparison of Parcel Allocations by Alternative..... IV-67

List of Tables

Table 2-1. Developed Public Recreation Areas on TVA Lands on Great Falls Reservoir IV-10
Table 2-2. Land Cover on TVA Owned Parcels and within the Vicinity of Great Falls Reservoir ... IV-11
Table 2-3. Invasive Non-native Plant Species that Pose a Severe Threat Known to Occur in Tennessee IV-15
Table 2-4. Federally and State-Listed Species in the Great Falls Reservoir Counties IV-18
Table 2-5. Habitat Requirements for Plant Species of Conservation Concern within 5 Miles of Grea Falls Reservoir IV-23
Table 2-6. Habitat Requirements for Wildlife Species of Conservation Concern within 3 Miles of Great Falls Reservoir IV-24
Table 2-7. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Great Falls Reservoir IV-28
Table 2-8. Wetland Types within the Great Falls Reservoir IV-31
Table 2-9. Population and Percent Growth – Great Falls Reservoir IV-37
Table 2-10. Employment and Income, 2010-2014 – Great Falls Reservoir IV-37
Table 2-11. Minority Population and Poverty, 2010-2014– Great Falls Reservoir IV-38
Table 3-1. Land Use Zone Definitions IV-41
Table 3-2. Summary of Proposed Land Use Allocations for Great Falls Reservoir Land Management Plan (Alternative B) IV-47
Table 3-3. Draft Great Falls Reservoir Land Management Plan (Alternative B) and 2011 Comprehensive Valleywide Land Plan Comparison IV-49

List of Figures

Figure 1-1. TVA Managed Reservoir Land IV-4
Figure 3-1. Percent of Great Falls Reservoir Acreage Allocated by Zone IV-48

ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effect
CFM	Caney Fork Mile
cfs	Cubic Feet per Second
CVLP	Comprehensive Valley Wide Land Plan
EIS	Environmental Impact Statement
EO	Executive Order
msl	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NRI	Nationwide Rivers Inventory
NRP	Natural Resource Plan
NWI	National Wetland Inventory
RLMP	Reservoir Land Management Plan
RVSMP	Reservoir Vital Signs Monitoring Program
SHPO	State Historic Preservation Officer
SMI	Shoreline Management Initiative
SMP	Shoreline Management Plan
TVA	Tennessee Valley Authority
TVA Board	TVA Board of Directors
USDA	U.S. Department of Agriculture
Valley	Tennessee River Valley Region

This page intentionally left blank

CHAPTER 1. INTRODUCTION

The draft Great Falls Reservoir Land Management Plan (RLMP) is a study of the Tennessee Valley Authority (TVA)-managed public land surrounding Great Falls Reservoir. It is one of eight draft RMLPs considered under Alternative B of this Environmental Impact Statement (EIS). The EIS Volume I contains information on the scoping process, allocation process, alternatives, comparison of the alternatives, and analysis of impacts. In addition, the EIS contains a summary, an index, and appendices.

Volume IV of the EIS address TVA's draft RLMP for Great Falls Reservoir. This Volume provides background information about TVA land management throughout its history and specifically TVA management of public land surrounding Great Falls Reservoir. It explains the purpose of the draft RMLP and describes the process used in its development. The draft RLMP includes the planning process, which lists the objectives around which the RMLP was developed and a summary of the allocation process. The Great Falls Reservoir Regional Overview (Chapter 2) describes the natural and social development of the reservoir and the surrounding area. The Parcel Descriptions (Chapter 4) include total acreage and parcel descriptions documenting proposed land management allocations. The allocation map is included as Appendix A of this draft RMLP.

Once TVA completes its Multiple RLMP EIS, this Volume will serve as the consolidated planning document addressing management of TVA reservoir lands on Great Falls Reservoir and will be available to TVA staff and the public.

1.1 Tennessee Valley Authority History

President Franklin Roosevelt needed creative solutions to lift the nation out of the depths of the Great Depression, and TVA is considered one of his most innovative initiatives. Roosevelt envisioned TVA as an agency different from any other. He asked Congress to create "a corporation clothed with the power of government but possessed of the flexibility and initiative of a private enterprise." On May 18, 1933, Congress passed the Tennessee Valley Authority Act (TVA Act). A link to the TVA Act is available at https://www.tva.com/About-TVA/Our-History.

From the start, TVA established a unique problem-solving approach to fulfilling its mission: Integrated Resource Management. Each issue TVA faced—whether it was power production, navigation, flood control, malaria prevention, reforestation, or erosion control—was studied in its broadest context. TVA weighed each issue relative to the others. From this beginning, TVA has

held fast to its strategy of integrated solutions, even as the issues changed over the years. A short TVA history is available at http://www.tva.com/abouttva/history.htm.

1.2 Overview of TVA's Mission and Environmental Policy

1.2.1 TVA's Mission

TVA has a rich history of improving quality of life and economic prosperity for people and businesses in the TVA service area. TVA was created by Congress in 1933 and charged with a unique mission—to improve the quality of life in the Valley through the integrated management of the region's resources. For more than eight decades, we have worked tirelessly to carry out that mission, and we are working just as hard to make life better for the nine million people who live in the Valley today. We serve the people of the Tennessee Valley by focusing on three key areas: energy, environment, and economic development.

1.2.2 Environmental Policy

As stated in TVA's 2007 Strategic Plan, "TVA will be proactive in addressing environmental concerns, including those related to global climate change." About half of the identified strategic objectives and critical success factors in the plan relate directly to TVA's environmental activities and policy-making.

Following the release of the 2007 Strategic Plan, the TVA Board asked for the development of an integrated environmental policy to outline objectives and critical success factors across the multiple areas of TVA's activities. In 2008, the TVA Board approved the Environmental Policy, which provides guiding principles for reducing the environmental impacts of TVA operations while continuing to provide reliable and affordable power to the Valley. In 2010, a biennial review of the Environmental Policy was completed, which did not result in major changes or revisions. TVA's overarching Environmental Policy objective is to provide cleaner, reliable, and affordable energy; support sustainable economic growth in the Valley; and engage in proactive environmental stewardship in a balanced and ecologically sound manner. A copy of the Environmental Policy is available at http://www.tva.com/environment/policy.htm.

1.2.3 Land Policy

On behalf of the United States, TVA originally acquired approximately 1.3 million acres of land in the Valley. Creation of the TVA reservoir system inundated approximately 470,000 acres with water. TVA has transferred or sold approximately 508,000 acres, the majority of which was transferred to other federal and state agencies for public uses. TVA currently controls approximately 293,000 acres of reservoir lands, which continue to be managed pursuant to the

TVA Act (Figure 1-1). As part of its management of these lands, TVA allocates them to various land use zones (see Section 3.1). These TVA-managed lands are frequently referred to as “TVA lands” in this document.

In 2006, TVA adopted a Land Policy to guide retention, disposal, and planning of real property. Accordingly, it is TVA’s policy to manage its lands to protect the integrated operation of the TVA reservoir and power systems, to provide for appropriate public use and enjoyment of the reservoir system, and to provide for continuing economic growth in the Valley. Recognizing that historical land transfers have contributed substantially to meeting multipurpose objectives, TVA maintains the policy of retaining in public ownership the reservoir lands under its control except in those rare instances where the benefits to the public will be so significant that transferring lands to private ownership or another public entity is justified. The Land Policy is available at https://www.tva.gov/Environment/Environmental-Stewardship/Land-Management/TVA-Land-Policy.

1.2.4 Shoreline Management Policy

In November 1998, TVA completed a Shoreline Management Initiative (SMI) EIS (TVA 1999) analyzing possible alternatives for managing residential shoreline development throughout the Valley. In April 1999, TVA adopted the agency’s current Shoreline Management Policy (SMP), which incorporates a strategy of managing public shoreline through an integrated approach that conserves, protects, and enhances shoreline resources and public use opportunities while providing for reasonable and compatible use of the shoreline by adjacent residents. The SMP defines the standards for vegetation management, docks, shoreline stabilization, and other residential shoreline alterations. The SMI EIS is available at https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy.

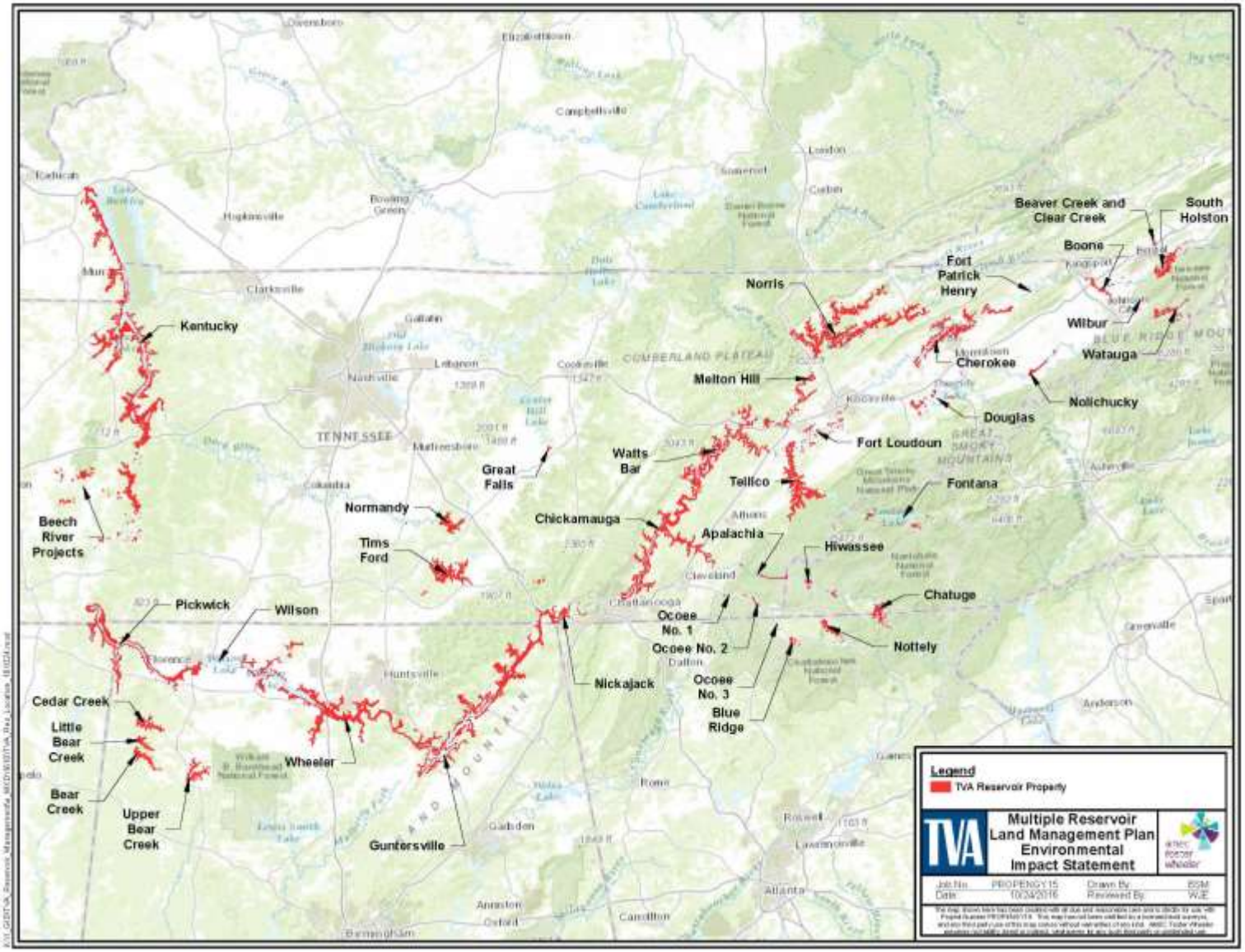


Figure 1-1. TVA Managed Reservoir Land

1.3 The Natural Resource Plan

In 2011, TVA completed a Natural Resource Plan (NRP) (TVA 2011) that strategically guides the management of both renewable and nonrenewable resources, underscoring the importance of protecting those resources that will be lost forever if they are not actively protected or improved today. TVA is one piece of the solution and recognizes the need for a coordinated and collaborative effort to meet the near- and long-term resource needs. As such, the NRP is designed to:

- Integrate the objectives of six resource areas (biological, cultural, recreation, water, public engagement and reservoir lands planning).
- Provide optimum public use benefit.
- Balance competing and sometimes conflicting resource uses.

These competing interests, coupled with today's environmental awareness and focus on preserving nonrenewable resources, underscore the necessity for a consistent approach to the management of TVA lands. The NRP represents TVA's high-level strategy for managing its natural resources in the near and long term. Detailed implementation plans, such as this draft RLMP, are being developed based on the NRP to drive specific implementation efforts. The NRP is available at https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan.

1.4 Purpose of Reservoir Land Planning

As a regional development agency and the nation's largest public power provider, TVA is committed to protecting and sustaining the environmental resources of the Valley for future generations through leadership in clean energy innovation and environmental management. In managing its public lands and resources, TVA seeks to provide efficient resource stewardship that is responsive to stakeholder interests.

TVA intends to manage its public land for an optimum level of multiple uses and benefits that protect and enhance natural, cultural, recreational, and visual resources in a cost-effective manner. Through this approach, TVA ensures that resource stewardship issues and stakeholder interests are considered while optimizing benefits and minimizing conflicts.

As part of the NRP, TVA developed a Comprehensive Valleywide Land Plan (CVLP). The CVLP guides resource management and administration decisions on the approximately 293,000 acres of TVA lands around 46 reservoirs. It identifies the most suitable uses for the land under TVA's control, identifying areas for project operations, sensitive resource management, natural resource conservation, industrial/commercial development, developed recreation, and shoreline access. The objectives of the CVLP are designed to implement TVA's mission of serving the Valley through energy, environment, and economic development. Under the CVLP methodology, TVA will draft and update RLMPs, such as this draft plan, for a portion of a reservoir, an entire reservoir, or a group of reservoirs. RLMPs are consistent with TVA's policies and programs discussed within this chapter.

The CVLP will be recalibrated as needed (as described under Alternative B in Volume I of this EIS, TVA proposes to update the target ranges of the CVLP to incorporate the findings of the eight draft RLMPs). The CVLP was based, in part, on the anticipation that some parcels of land may be better allocated to different land use zones from those initially identified. For example, field assessments may identify additional areas that warrant the sensitive resource management allocation. In addition, during the creation or update of each individual RLMP, TVA may determine, either for its own management purposes or as a result of public input, that certain parcels of land should be used differently from how they have been used in the past. The preliminary results of the Great Falls Reservoir planning effort have been included in determining the proposed revisions to the CVLP.

The draft Great Falls RLMP and revisions to the CVLP will be included in the five-year cyclic review of the NRP.

CHAPTER 2. REGIONAL OVERVIEW

2.1 History of Great Falls Dam

The Cumberland River Basin rises in southeastern Kentucky, abutting the border with the Commonwealth of Virginia. The basin includes 7,560 square miles in Kentucky and a 10,160-square mile arc through the northern part of middle Tennessee. The basin is approximately 350 miles long and averages 50 miles wide.

At its source, the Cumberland River and its tributaries are flowing in narrow steep sided valleys through very rugged country. The narrow valleys continue until Burnside, where the river emerges from the Cumberland Plateau onto the relative openness of the Highland Rim. As the river crosses the Highland Rim, the valley cuts deeper into the surface.

The Cumberland River continues south into Tennessee. Between Celina and Carthage, the ridge tops gradually fall back as the river transitions from the domain of the Highland Rim into that of the Central Basin. Below Carthage the effects of the Highland Rim are left behind and the river once again flows through a relatively open area where the prevailing elevation is only about 100 feet above the river. Just west of Nashville, the flow re-enters the Highland Rim province, and the surrounding territory is once again several hundred feet above the valley.

Great Falls Dam is located on the Caney Fork River about halfway between McMinnville and Sparta, Tennessee. The main lake is comprised of the Caney Fork, which at this point flows westerly. Major tributaries include the Collins River, Rocky River, Calfkiller River and Cane Creek. In their original, natural state, all these streams were comparatively shallow with swift flow over the beds of deep ravines.

The Tennessee Electric Power Company, on April 24, 1912, acquired the franchises and property of the Great Falls Power Company, and four years later completed Great Falls Dam. Initial operations at the dam occurred in December 1916. In 1925, Tennessee Electric Power Company redesigned the dam and raised it about 35 feet to its present height. After an extended legal dispute between the company and TVA, on August 16, 1939, TVA acquired the dam, the reservoir land and improvements, all flowage easements, the powerhouse and generation facilities, and the electric distribution system.

The dam consists of 18 radial gates controlling water flow through the spillway. There are four 19-ton fixed hoists that operate four of the spillway gates and two electrically operated traveling hoists operate the other gates.

2.2 Great Falls Reservoir and Present Shoreline

Although construction of the dam raised the water elevation approximately 70 feet, Great Falls Reservoir is confined to deep ravines, and most of the adjacent property consists of steeply rolling land and bluffs. Near the upper end of the Caney Fork arm, the reservoir is principally confined to the original stream banks, which are comparatively low, and the adjoining bottomland is subjected to periodic headwater flooding.

Great Falls Reservoir is a single-purpose power project with a limited amount of flood storage. The dam is 92 feet high and stretches 800 feet across the Caney Fork. The reservoir is 22 miles long and has 120 miles of winding shoreline. There are approximately 1,830 acres of water surface and flood-storage capacity of 30,500 acre-feet. The summer pool elevation is elevation 800.0-feet mean sea level (msl), and the normal minimum pool is elevation 785 feet msl. The minimum tailwater elevation at the powerhouse is 649 feet msl, and the tailwater elevation with the powerhouse in full operation is 657.6 feet msl.

The drainage area upstream of the Great Falls Dam is 1,675 square miles. The maximum known flood at the dam site was recorded at 210,000 cubic feet per second (cfs) in March 1929. The average daily water flow at the site is about 3,146 cfs.

2.2.1 Land Use and Prime Farmland

TVA acquired approximately 8,000 acres of land in fee and flowage easement rights on Great Falls Reservoir in a deed dated August 15, 1939 from Tennessee Electric Power Company. TVA sold most of its fee property in the 1950s except for the remaining portion of approximately 362 acres surrounding the Great Falls Dam. TVA retains an estimated 4,000 to 4,500 acres in flowage easements. Other than the fee acreage surrounding Great Falls Dam, any remaining fee property owned by TVA would be slivers of remaining parcels not sold in the 1950s and mostly at or under the water’s surface and would require extensive title and survey work by TVA to confirm if any exists. The approximate 362 acres surrounding the dam are the scope of this draft RLMP.

The area surrounding the reservoir is rural, and the shoreline of the reservoir is primarily comprised of a forested areas, residential development, suburban areas, parks, farmed areas

and recreational areas. These uses are generally reflected in the land cover database for the parcels around the reservoir and the surrounding area (which identifies the land cover as primarily forested and developed open space. Developed open space includes single family housing units on large lots, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes.

There are approximately 120 miles of shoreline along the Great Falls Reservoir (see Volume I, Table 3-1). Although all of the residential development on Great Falls Reservoir is on private land, TVA holds flowage easement rights along portions of the private shoreline. Any structures placed within existing flowage easements are subject to Section 26a of the TVA Act.
Section 26a of the TVA Act requires that TVA's approval be obtained prior to the construction, operation, or maintenance of obstruction affecting navigation, flood control, or public lands or reservations along or in the Tennessee River or any of its tributaries.

TVA public lands on Great Falls Reservoir include 23.2 acres of prime farmland, all of which occurs on land that would be allocated as Zone 6 (Developed Recreation). Prime farmland has the best combination of soil physical and chemical characteristics for producing food and fiber and is protected from conversion to industrial and nonagricultural uses by the United States Department of Agriculture (USDA). It is noted, however, that current soil mapping of prime farmland soils does not account for existing developed uses that may have previously disturbed and potentially converted prime farmland. No land of statewide importance designation occurs around the Great Falls Reservoir.

In Zone 6, major soil disturbances could occur in specific locations, if recreation facilities are constructed. Conversely, large areas could remain unaffected for more dispersed recreation management.

For more information on land use and prime farmland and potential impacts of the draft RLMP, see Sections 3.2 and 3.3, Volume I of the EIS.

2.2.2 Recreation

TVA provides public lands for developed and dispersed recreational purposes through the reservoir lands planning process. Developed recreation includes campgrounds, lodges, marinas, boat ramps, parks, swimming pools, beaches and golf courses. Dispersed recreation activities include picnicking, primitive camping, hiking, bank fishing, hunting, kayaking, and canoeing. In 2005, TVA developed a recreation strategic plan aimed at collaboratively

enhancing recreational opportunities and addressing unmet recreational needs while managing the resources of the Tennessee River system (TVA 2005). This strategy laid out guiding principles for how to best design and develop recreation opportunities. During this reservoir lands planning effort, tracts of TVA-managed lands around Great Falls Reservoir were categorized based upon a suitable use that is consistent with TVA policy and guidelines, and applicable laws and regulations. Whitewater rapids below the dam are world-renowned for kayaking and canoeing and have been the site for national and international paddling events

Great Falls Reservoir is an outdoor recreation resource that attracts visitors from within and outside the region. The only recreation area that has been developed on the Great Falls Reservoir is Rock Island State Park which includes the rugged beauty of the Caney Fork Gorge. This park is managed by the state of Tennessee. The park has an observation area, picnic facilities, restrooms and trails (Tennessee State Parks 2016). The Caney Fork River Gorge contains scenic overlooks, waterfalls, deep pools and limestone paths perfect for hiking, swimming, fishing, kayaking, and exploring.

Developed recreation area lands that are managed by TVA or another public agency for recreation purposes are shown on Table 2-1. Table 2-1 does not itemize recreation areas on non-TVA shorelands (Zone 1) because these areas are beyond the scope of this draft RLMP. Great Falls Reservoir parcel descriptions (see Chapter 4) further describe the management entity and management descriptions of recreation facilities on lands managed by either TVA or under contractual agreement.

Table 2-1. Developed Public Recreation Areas on TVA Lands on Great Falls Reservoir

Recreation Area	Managing Entity	Parcel Location
Great Falls Dam Reservation	TVA	1
Rock Island State Park	State of Tennessee	2

Dispersed recreation areas provide unconfined opportunities that are predominantly nature-based or water-based. Dispersed recreation in the forms of kayaking, bank fishing, hiking trails, and sight-seeing occur at Great Falls on lands that would be allocated to Zone 2 (Project Operations) and additional dispersed recreation occurs on undeveloped areas of the Rock Island State Park that is proposed for allocation to Zone 6 (Developed Recreation).

The state of Tennessee has requested that TVA grant a term easement for public and commercial and recreation purposes over Parcel 2 in order to provide additional developed recreation opportunities (see Parcel 2 description in Chapter 4).

For more information on recreation resources and the potential impacts of the proposed land use allocations in the draft RLMP, see Section 3.4 of Volume I of the EIS.

2.2.3 Terrestrial Ecology

Great Falls Reservoir lies within the Interior Plateau ecoregion (USEPA 2013). The Interior Plateau ecoregion is a series of grassland plateaus and forested uplands that are generally lower in elevation than the Appalachian Mountains to the east, but higher than the plains to the south. The variety of landforms, soils, climate, and geology across the Interior Plateau have allowed for an extremely diverse assemblage of animals including migratory birds of conservation concern. Deciduous forests and mixed evergreen-deciduous forests provide wildlife habitat among the agriculture and more urbanized areas (USGS 2016). Table 2-2 contains a summary of the land cover within and in the vicinity of Great Falls Reservoir (Homer et al. 2015).

Table 2-2. Land Cover on TVA Owned Parcels and within the Vicinity of Great Falls Reservoir

	TVA Property		Vicinity (5-Mile Radius)	
Land Cover Type	**Acres[1]**	**Percent Cover (%)**	**Acres[1]**	**Percent Cover (%)**
Barren Land	8.9	2.5	353.6	0.1
Developed				
Developed, High Intensity	0	0.0	429.3	0.2
Developed, Medium Intensity	3.3	0.9	1,630.1	0.6
Developed, Low Intensity	7.3	2.0	5,154.9	2.0
Developed, Open Space	51.8	14.3	13,750.9	5.3
Forest				
Deciduous Forest	229.3	63.3	116,659.8	44.9
Evergreen Forest	9.1	2.5	9,039.4	3.5
Mixed Forest	25.6	7.1	7,244.1	2.8
Shrubland				
Shrub-Scrub	8.1	2.2	5,120.4	2.0
Herbaceous				
Grassland/Herbaceous	4.8	1.3	4786.9	1.8
Hay/Pasture	7.9	2.2	76,752.5	29.5

Land Cover Type	TVA Property		Vicinity (5-Mile Radius)	
	Acres[1]	Percent Cover (%)	Acres[1]	Percent Cover (%)
Planted/Cultivated				
Cultivated Crops	3.6	1.0	14,101.8	5.4
Wetlands/Open Water				
Woody Wetlands	0		1,017.9	
Emergent Herbaceous Wetlands	0.04	0.0	123.7	0.0
Open Water	2.7	0.7	3,791.9	1.5
Total	**362.4**	**100**	**259,957.1**	**100**

[1] Source: Homer et al. 2016

Oak-hickory deciduous forest is the most abundant forest type in the eastern United States and is prevalent in the Great Falls Reservoir region. Some mixed deciduous-evergreen and evergreen forests are also present in this region. Numerous bird species nest in deciduous forests. Typical species include wild turkey, whip-poor-will, ruby-throated hummingbird, red-eyed vireo, black-throated green warbler, black-and-white warbler, ovenbird, hooded warbler, and the scarlet tanager. Several additional migratory bird species of concern utilize these habitats in this area including black-billed cuckoo, Kentucky warbler, red-headed woodpecker, wood thrush and worm-eating warbler (USFWS 2016a). Common mammal species of deciduous forests include white-tailed deer, red bat, eastern chipmunk, eastern gray and southern flying squirrels, white-footed mouse, short-tailed shrew, gray fox, and bobcat.

Deciduous forests and mixed evergreen-deciduous forests account for 70 percent of the land cover within the Great Falls Reservoir parcels (see Table 2-2). Some of these deciduous forested areas are quite mature with large diameter trees. Evergreen forests make up an additional three percent of the land cover. Seeps, streams, and temporary ponds in deciduous forests provide habitat for numerous amphibians including American and Fowler's toads, green frog, northern cricket frog, and other frogs, and a range of salamanders including spotted and mole salamanders. Reptiles commonly found in deciduous forests especially near water include eastern fence lizard, ground skink, five-lined skink, eastern box turtle, eastern worm snake, black racer, and ring-necked snake. The riparian zones along streams within deciduous forests provide nesting habitat for Acadian flycatchers, northern parula, and migratory species of

concern in this area, including the Louisiana waterthrush and prothonotary warbler (USFWS 2016a).

Evergreen and mixed evergreen-deciduous forests provide nesting for woodland birds including pine and yellow-throated warblers, great crested flycatcher, and chuck-will's-widow. Several additional migratory bird species of concern utilize these habitats in this area including black-billed cuckoo, Kentucky warbler, fox sparrow, and prairie warbler (USFWS 2016a). Other animals that inhabit evergreen and evergreen-deciduous forests but are not restricted to them include white-tailed deer, wild turkey, eastern mole, eastern kingsnake, smooth earth snake, eastern fence lizard, six-lined racerunner, and a variety of salamanders, frogs, and toads, especially near wet areas.

Non-forested herbaceous community types in the Great Falls Reservoir region are dominated by pasturelands and hayfields. Herbaceous habitats including grasslands, barrens, hayfields, and pastures account for approximately 4 percent of the land cover on the reservoir parcels (see Table 2-2). Early successional habitats provide habitat for a variety of bird species including eastern bluebird, eastern meadowlark, American crow, American kestrel, and red-tailed hawk. Several additional migratory bird species of concern utilize these habitats in this area including Henslow's sparrow, dickcissel, sedge wren, short-eared owl, and willow flycatcher (USFWS 2016a). Amphibians and reptiles that use these habitats include spring peeper and common garter snake.

Bird and mammal diversity greatly increases at edge habitats especially those between forested areas bordered by early successional habitats. Birds commonly found at these edge habitats include wild turkey, great crested flycatcher, white-eyed vireo, Carolina wren, blue-gray gnatcatcher, brown thrasher, common yellowthroat, yellow-breasted chat, indigo bunting, eastern towhee, field and song sparrow, and orchard oriole. Several additional migratory bird species of concern utilize these habitats in this area including blue-winged warbler, dickcissel, loggerhead shrike, red-headed woodpecker, and willow flycatcher (USFWS 2016a). Mammals typically inhabiting edges include eastern cottontail, red fox, coyote, long-tailed weasel, and striped skunk.

The reservoir parcels provide wetlands, including wooded swamps and open water habitats, and associated riparian zones that are used by a variety of wildlife. Common species include great blue heron, green heron, belted kingfisher, common yellowthroat, and northern parula. No

colonial nesting bird colonies/heronries have been observed on TVA parcels on Great Falls Reservoir (TVA 2016). Many additional migratory bird species of concern utilize these habitats in this area including bald eagle, least bittern, Louisiana waterthrush, prothonotary warbler, rusty blackbird, sedge wren, short-eared owl, and willow flycatcher (USFWS 2016a). Shallow embayments, especially those with emergent vegetation, provide foraging habitat for waterfowl. Common waterfowl include wood ducks, Canada geese, and mallards. Other waterfowl periodically present include American black duck, gadwall, green-winged teal, ring-necked duck, lesser scaup, common goldeneye, bufflehead, and hooded merganser.

Shorebird use of the Great Falls Reservoir is limited to shallow embayments and exposed mud flats. Species such as spotted sandpiper that forage along the margins of reservoirs and killdeer that are not restricted to foraging on mud flats are commonly observed. Common amphibians found in the riparian zones include green frog, eastern narrowmouth toad, and Fowler's toad. Reptiles include northern water snake, common snapping turtle, and painted turtles. Common mammals include mink, muskrat, raccoon, and American beaver.

A search of the TVA Natural Heritage database in May 2016 indicated that 407 caves are located within 3 miles of Great Falls Reservoir. One cave is located on a TVA parcel (TVA 2016).

For information on terrestrial ecology and potential impacts of the draft RLMP, see Volume I, Section 3.5.

2.2.3.1 Invasive Nonnative Species

Many of the planned TVA parcels around Great Falls Reservoir contain a substantial amount of invasive nonnative species. Executive Order (EO) 13112 defines an invasive nonnative species as any species including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem; and whose introduction does or is likely to cause economic or environmental harm or harm to human health (Federal Register Volume 64, Number 25, The Southeastern Exotic Plant Pest Council provides a list of nonnative invasive species that could pose potential threats to native ecosystems and human health for each southeastern state. In reviewing the Tennessee exotic plant pest list (Tennessee Exotic Plant Pest Council 2009), there were 26 species occurring in Tennessee that pose a severe threat to native ecosystems observed in the Great Falls Reservoir region (Table 2-3).

Table 2-3. Invasive Non-native Plant Species that Pose a Severe Threat Known to Occur in Tennessee

Common Name	Scientific Name
Asian bittersweet	*Celastrus orbiculatus*
Autumn olive	*Elaeagnus umbellata var. parviflora*
Cheat grass	*Bromus tectorum*
Chinese privet	*Ligustrum sinense*
Chinese yam	*Dioscorea oppositifolia*
Common privet	*Ligustrum vulgare*
Common St. John's-wort	*Hypericum perforatum*
Hydrilla	*Hydrilla verticillata*
Japanese honeysuckle	*Lonicera japonica*
Japanese knotweed	*Polygonum cuspidatum*
Japanese stiltgrass	*Microstegium vimineum*
Johnson grass	*Sorghum halepense*
Korean clover	*Kummerowia stipulacea*
Kudzu	*Pueraria montana var. lobata*
Mimosa	*Albizia julibrissin*
Multiflora rose	*Rosa multiflora*
Princess tree	*Paulownia tomentosa*
Purple loosestrife	*Lythrum salicaria*
Sericia lespedeza	*Lespedeza cuneata*
Shrubby bushclover	*Lespedeza bicolor*
Tree of heaven	*Ailanthus altissima*

Source: Tennessee Exotic Plant Pest Council 2009

All of these species have the potential to adversely impact the native plant communities because of their potential to spread rapidly and displace native vegetation. TVA considers all of the species a severe threat to local plant communities.

In addition to invasive or non-native plant species discussed above, there are several exotic, non-native, and/or pest insect species and plant diseases that are known to occur within the counties encompassing Great Falls Reservoir. These insects and diseases can have devastating impacts on native plant communities and human crops/fruits. The insects include: Japanese beetle (*Popillia japonica),* brown marmorated stink bug (*Halyomorpha halys*), kudzu bug (*Megacopta cribraria*), spotted wing drosophila (*Drosophila suzukii*), and southern pine beetle (*Dendroctonus frontalis*) (EDDMapS 2016). These species all have the potential to pose problems to native vegetation, wildlife, crops, landscaping and gardens, and/or overall

ecosystems due to the lack of natural predators or diseases to help control their populations giving them the ability to out-compete native species.

The following plant diseases are also known to occur in the counties containing Great Falls Reservoir: butternut canker (*Sirococcus clavigignenti-juglandacearum*), dogwood anthracnose (*Discula destructive*), Heterobasidion root rots (*Heterobasidion* spp.), and oak wilt (*Ceratocystis fagacearum*). Most of these diseases target certain plant species or groups of species, and can have serious impacts to local populations of those plants and trees.

There are several exotic, non-native, and/or pest terrestrial wildlife and other insect species that are known to occur within the region. These include: Asian tiger mosquito (*Aedes albopictus*), cat (feral) (*Felis catus*), and European starling (*Sturnus vulgaris*) (EDDMapS 2016). These species have the potential to pose problems to native wildlife and ecosystems due to their ability to out-compete native species and spread quickly. Some of these species can pose threats to human health and safety. Asian tiger mosquitoes are known to transmit various diseases to humans.

2.2.4 Aquatic Ecology

Streams of the Highland Rim Ecoregion are characterized by coarse chert gravel and sand substrates interspersed with bedrock areas, moderate gradients, clear waters, and moderate to low productivity, and thus little aquatic vegetation except near spring sources (Etnier and Starnes 1993). The Highland Rim, because of its geologic complexity and numerous semi-independent drainage systems, harbors the most diverse fish fauna of any region of comparable size in North America. The greater area in which the Great Falls Reservoir is located is unique in that virtually all of the surface strata is composed of chert rock and its soil derivatives, which support limited tree life. Much of the area appears as a natural prairie and numerous springs emanate to the surface from the many aquifers in the softer Mississippian limestones below, and the area is characterized by spring-associated fish faunas.

The aquatic ecological conditions in streams and reservoirs are monitored under a number of TVA programs including the Reservoir Vital Signs Monitoring Program (RVSMP). However, Great Falls Reservoir is not part of the RVSMP program. In general, the aquatic community within Great Falls Reservoir is typical of most large river systems in Tennessee and eastern U.S. Common fish species include brook trout, crappie, muskie, channel catfish, flathead catfish, bluegill, carp, smallmouth bass, largemouth bass, and walleye.

2.2.4.1 Invasive Nonnative Aquatic Species

Although there are many exotic or introduced aquatic species within the region, there are a few species that are considered more detrimental due to their ability to have broad impacts to overall aquatic systems as well as direct impacts to humans. These include Asian carp, especially bighead carp (*Hypophthalmichthys nobilis*) and silver carp (*Hypophthalmichthys molitrix*) (EDDMapS 2016), and zebra mussels (*Dreissena polymorpha*).

Asian carp cause serious damage to the native fish populations in the lakes and rivers that they infest because they out-compete other fish for food and space. Carp are also thought to lower water quality, which can kill off sensitive organisms like native freshwater mussels. Asian carp have been known to dominate entire streams, effectively pushing out the native species. Asian carp are also known to pose danger to humans due to their habit of jumping out of the water and striking boaters and water skiers and damaging boats and equipment.

Zebra mussels are notorious for their biofouling capabilities by colonizing water supply pipes of hydroelectric and nuclear power plants, public water supply plants, and industrial facilities. They colonize pipes constricting flow, therefore reducing the intake in heat exchangers, condensers, firefighting equipment, and air conditioning and cooling systems. Navigational and recreational boating can be affected by increased drag due to attached mussels. Small mussels can get into engine cooling systems causing overheating and damage. Navigational buoys have been sunk under the weight of attached zebra mussels. Zebra mussels can have profound effects on the ecosystems they invade. They primarily consume phytoplankton, but other suspended material is filtered from the water column including bacteria, protozoans, zebra mussel veligers, other microzooplankton and silt (Benson et al. 2016).

For information on aquatic ecology and potential impacts of the draft RLMP, see Volume I, Section 3.6.

2.2.5 Threatened and Endangered Species

TVA biologists and natural resource specialists used the TVA Natural Heritage database to assess the endangered and threatened species within and around Great Falls Reservoir. The TVA Natural Heritage database was created to ensure that environmental compliance activities are conducted in a consistent manner across the TVA Region and that these activities meet the requirements of National Environmental Policy Act (NEPA) and the Endangered Species Act. The federally listed and state-listed species identified from the TVA Natural Heritage database searches that are known to occur in the counties surrounding Great Falls Reservoir are

presented in Table 2-4. For the purpose of this document state-listed species includes those that are being tracked, in need of management, candidates, proposed for listing and of special concern. As noted below, there are two state-listed plants species occurring on two TVA parcels on Great Falls Reservoir. Only one of the terrestrial wildlife species considered in need of management by the state is known to occur on TVA parcels, however, suitable habitat is present for many of the other species of concern. There are no records of any listed aquatic species on TVA parcels, however, there are records of five listed species within Great Falls Reservoir.

Table 2-4. Federally and State-Listed Species in the Great Falls Reservoir Counties

Common Name	Scientific Name	Status[1]	
		Federal	State (Rank)
Amphibians			
Barking treefrog	*Hyla gratiosa*	--	D (S3)
Four-toed salamander	*Hemidactylium scutatum*	--	D (S3)
Hellbender	*Cryptobranchus alleganiensis*	PS	D (S3)
Tennessee Cave salamander	*Gyrinophilus palleucus*	--	T (S2)
Arachnids			
A cave obligate harvestman	*Phalangodes appalachius*	--	TRKD (S3)
A cave obligate pseudoscorpion	*Kleptochthonius daemonius*		TRKD (S1S2)
An eptonetid spider from Ghost River Cave	*Appaleptoneta sp. 1*	--	TRKD (S1)
A harvestman from Cummings Cove Cave	*Theromaster sp. 1*	--	TRKD (S1)
Birds			
Bald eagle	*Haliaeetus leucocephalus*	DM	D (S3)
Cerulean warbler	*Setophaga cerulea*	--	D (S3B)
Common barn-owl	*Tyto alba*	--	D (S3)
Golden eagle	*Aquila chrysaetos*	--	T (S1)
Golden-winged warbler	*Vermivora chrysoptera*	--	D (S3B)
Least bittern	*Ixobrychus exilis*	--	D (S2B)
Peregrine falcon	*Falco peregrinus*	PS:E	E (S1B)
Swainson's warbler	*Limnothlypis swainsonii*	--	D(S3)
Crustacean			
Swamp River Cave amphipod	*Stygobromus sp. 22*	--	TRKD (S3)
Yeatmans groundwater copepod	*Diacyclops yeatmani*	--	TRKD (S1)
Diplopods			
A cave millipede	*Chaetaspis mollis*	--	TRKD (S1)
A cave obligate millipede	*Tetracion tennesseensis*	--	TRKD (S2S3)
A cave obligate millipede	*Scoterpes ventus*	--	TRKD (S1)
Fish			
Barrens darter	*Etheostoma forbesi*	--	E (S1)

Common Name	Scientific Name	Status[1]	
		Federal	State (Rank)
Barrens topminnow	*Fundulus julisia*	--	E (S1)
Bedrock shiner	*Notropis rupestris*	--	D (S2)
Bluemask darter	*Etheostoma akatulo*	LE	E (S1)
Cherry darter	*Etheostoma etnieri*	--	TRKD (S3)
Flame chub	*Hemitremia flammea*	--	D (S3)
Redband darter	*Etheostoma luteovinctum*	--	D (S4)
Sooty darter	*Etheostoma olivaceum*	--	D (S3)
Southern cavefish	*Typhlichthys subterraneus*	--	D (S3)
Gastropods			
Cupped vertigo	*Vertigo clappi*	--	TRKD (S1)
Ornate rocksnail	*Lithasia geniculata*	--	TRKD (S2)
Rockpile liptooth	*Daedalochila auriformis*	--	TRKD (S1)
Umbilicate river snail	*Leptoxis subglobosa umbilicata*	--	TRKD (S1)
Insects			
A cave cricket	*Hadenoecus opilionides*	--	TRKD (S3)
A cave obligate beetle	*Pseudanophthalmus templetoni*	--	TRKD (S1)
A cave obligate beetle	*Tychobythinus strinatii*	--	TRKD (S1S2)
A cave obligate beetle	*Pseudanophthalmus farrelli*	--	TRKD (S1S2)
A cave obligate beetle	*Pseudanophthalmus robustus*	--	TRKD (S3)
A cave obligate beetle	*Nelsonites walteri*	--	TRKD (S3)
A cave obligate beetle	*Pseudanophthalmus vanburenensis*	--	TRKD (S1)
A cave obligate beetle	*Pseudanophthalmus macradei*	--	TRKD (S1S2)
A cave obligate springtail	*Pseudosinella aera*	--	TRKD (S2)
A cave obligate springtail	*Pseudosinella christianseni*	--	TRKD (S2)
A cave obligate springtail	*Pseudosinella spinosa*	--	TRKD (S2)
A rove beetle	*Aloconota diversiseta*	--	TRKD (S1)
A rove beetle	*Atheta lucifuga*	--	TRKD (S2)
A springtail	*Sinella cavernarum*	--	TRKD (S3)
A springtail	*Pseudosinella hirsuta*	--	TRKD (S3)
A springtail from Indian Cave	*Folsomia sp.2 nr. macrochaeta*	--	TRKD (S1)
A Viatica Group springtail	*Hypogastrura sp. 1*	--	TRKD (S1)
Copeland's springtail	*Triacanthella copelandi*	--	TRKD (S1)
Cumberland ground beetle	*Trechus cumberlandus*	--	TRKD (S2)
Indian Cave Point cave beetle	*Pseudanophthalmus tiresias*	C	TRKD (S1)
Rumbling Falls Cave beetle	*Pseudanophthalmus sp. 27*	--	TRKD (S1)
Rumbling Falls Cave dipluran	*Litocampa sp. 5*	--	TRKD (S1)
Swamp River Cave onychiurus	*Onychiurus sp. 2*	--	TRKD (S1)
Swamp River Cave neanura	*Neanura sp. 1*	--	TRKD (S1)
Swamp River Cave pseudosinella	*Pseudosinella sp. 5*	--	TRKD (S1)
Yeatman's Groundwater Copepod	*Diacyclops yeatmani*	--	TRKD (S1)

Common Name	Scientific Name	Status[1]	
		Federal	State (Rank)
Mammals			
Allegheny woodrat	*Neotoma magister*	--	D (S3)
Eastern small-footed bat	*Myotis leibii*	--	D (S2S3)
Gray bat	*Myotis grisescens*	LE	E (S2)
Indiana bat	*Myotis sodalis*	LE	E (S1)
Northern long-eared bat	*Myotis septentrionalis*	LT	-- (S1S2)
Pygmy shrew	*Sorex hoyi*	--	TRKD (S2)
Rafinesque's big-eared bat	*Corynorhinus rafinesquii*	--	D (S3)
Smoky shrew	*Sorex fumeus*	--	D (S4)
Southeastern shrew	*Sorex longirostris*	--	D (S4)
Mussels			
Cumberland pigtoe	*Pleurobema gibberum*	LE	E (S1)
Dromedary pearlymussel	*Dromus dromas*	LE	E (S1)
Forkshell	*Epioblasma lewisii*	--	EXTI (SX)
Little-wing pearlymussel	*Pegias fabula*	LE	E (S1)
Salamander mussel	*Simpsonaias ambigua*	--	TRKD (S1)
Smooth rabbitsfoot	*Quadrula cylindrica*	LT	TRKD (S3)
Spectaclecase	*Cumberlandia monodonta*	LE	TRKD (S2S3)
White wartyback	*Plethobasus cicatricosus*	LE	E (S1)
Plants			
American barberry	*Berberis canadensis*	--	SPCO (S2)
American chestnut	*Castanea dentata*	--	SPCO (S2S3)
American ginseng	*Panax quinquefolius*	--	S-CE (S3S4)
American pillwort	*Pilularia americana*	--	SPCO (S1S2)
American water-pennywort	*Hydrocotyle americana*	--	E (S1)
Barratt's sedge	*Carex barrattii*	--	E (S2)
Beakrush	*Rhynchospora perplexa*	--	T (S2)
Beakrush	*Rhynchospora rariflora*	--	E (S1)
Beardgrass	*Gymnopogon brevifolius*	--	SPCO (S1S2)
Blomquist leafy liverwort	*Lejeunea blomquistii*	--	SPCO (S1S2)
Blue cohosh	*Caulophyllum giganteum*	--	T (S1)
Branching whitlow-wort	*Draba ramosissima*	--	SPCO (S2)
Butternut	*Juglans cinerea*	--	T (S3)
Button snakeroot	*Eryngium integrifolium*	--	T (S1)
Canby's lobelia	*Lobelia canbyi*	--	T (S2S3)
Coastal-plain yellow-eyed-grass	*Xyris ambigua*	--	E (S1)
Creeping St. John's-wort	*Hypericum adpressum*	--	E (S1)
Crested fringed orchid	*Platanthera cristata*	--	SPCO (S2S3)
Cumberland rosemary	*Conradina verticillata*	LT	T (S3)
Deam's copperleaf	*Acalypha deamii*	--	SPCO (S1)
Death-camas	*Zigadenus leimanthoides*	--	T (S2)
Drooping bluegrass	*Poa saltuensis*	--	T (S1)
Dwarf huckleberry	*Gaylussacia dumosa*	--	T (S3)
Dwarf milkwort	*Polygala nana*	--	E (S1)

Common Name	Scientific Name	Status[1]	
		Federal	State (Rank)
Dwarf sundew	*Drosera brevifolia*	--	T (S2)
Eggert's sunflower	*Helianthus eggertii*	DM	SPCO (S3)
Foxtail clubmoss	*Lycopodiella alopecuroides*	--	T (S2)
Granite gooseberry	*Ribes curvatum*	--	T (S1)
Globe-fruited ludwigia	*Ludwigia sphaerocarpa*	--	T (S1)
Hairy umbrella-sedge	*Fuirena squarrosa*	--	SPCO (S1)
Harper's umbrella-plant	*Eriogonum longifolium var. harperi*	--	E (S1)
Horse-tail spikerush	*Eleocharis equisetoides*	--	E (S1)
Lance-like spikerush	*Eleocharis lanceolata*	--	SPCO (S1)
Large-leaved grass-of-parnassus	*Parnassia grandifolia*	--	SPCO (S3)
Leggett's pinweed	*Lechea pulchella*	--	E (S1)
Liverwort	*Cololejeunea ornata*	--	T (S1)
Liverwort	*Radula voluta*	--	SPCO (S2)
Liverwort	*Metzgeria uncigera*	--	SPCO (S1)
Loesel's twayblade	*Liparis loeselii*	--	T (S1)
Loose-head beakrush	*Rhynchospora chalarocephala*	--	T (S1)
Loosestrife	*Lysimachia x producta*	--	SPCO (S1)
Low frostweed	*Helianthemum propinquum*	--	E (S1S2)
Maidencane	*Panicum hemitomon*	--	SPCO (S2)
Manna-grass	*Glyceria acutiflora*	--	SPCO (S2)
Marsh pea	*Lathyrus palustris*	--	SPCO (S1)
Narrow blue flag	*Iris prismatica*	--	T (S2S3)
Narrow-leaved wild leek	*Allium burdickii*	--	T-CE (S1S2)
Narrowleaf bushclover	*Lespedeza angustifolia*	--	T (S2)
Nestronia	*Nestronia umbellula*	--	E (S1)
Northern white cedar	*Thuja occidentalis*	--	SPCO (S3)
Palamocladium	*Palamocladium leskeoides*	--	T (S1)
Pale manna grass	*Torreyochloa pallida*	--	SPCO (S1)
Panic-grass	*Dichanthelium acuminatum ssp. leucothrix*	--	SPCO (S1)
Price's potato-bean	*Apios priceana*	LT	E (S3)
Prickly hornwort	*Ceratophyllum echinatum*	--	SPCO (S1)
Rose pogonia	*Pogonia ophioglossoides*	--	E (S2)
Shadow-witch orchid	*Ponthieva racemosa*	--	E (S1)
Sharp's lejeunea	*Lejeunea sharpii*	--	E (S1S2)
Shining ladies'-tresses	*Spiranthes lucida*	--	T (S1S2)
Short-head rush	*Juncus brachycephalus*	--	SPCO (S2)
Small white leek	*Allium tricoccum*	--	S-CE (S1S2)
Spreading false-foxglove	*Aureolaria patula*	--	SPCO (S3)
Spotty featherwort	*Plagiochila punctata*	--	SPCO (S1)
Sundew	*Drosera capillaris*	--	T (S1)
Svenson's Wild-rye	*Elymus svensonii*	--	T (S2)
Swamp loosestrife	*Lysimachia terrestris*	--	E (S1)

Common Name	Scientific Name	Status[1]	
		Federal	State (Rank)
Swamp lousewort	*Pedicularis lanceolata*	--	SPCO (S1S2)
Ten-angle pipewort	*Eriocaulon decangulare*	--	E (S1)
Torrey muhly	*Muhlenbergia torreyana*	--	E (S1)
Virginia chainfern	*Woodwardia virginica*	--	SPCO (S2)
Virginia spiraea	*Spiraea virginiana*	LT	E (S2)
Water-milfoil	*Myriophyllum pinnatum*	--	E (S1)
Western wallflower	*Erysimum capitatum*	--	E (S1S2)
White fringeless orchid	*Platanthera integrilabia*	THR	E (S2S3)
Wood lily	*Lilium philadelphicum*	--	E (S1)
Wolf spikerush	*Eleocharis wolfii*	--	E (S1)
Yellow-eyed-grass	*Xyris laxifolia var. iridifolia*	--	T (S2)
Yellow fringeless orchid	*Platanthera integra*	--	E (S1)
Yellow trout-lily	*Erythronium rostratum*	--	SPCO (S2)
Zigzag bladderwort	*Utricularia subulata*	--	T (S1)
Reptiles			
Eastern slender glass lizard	*Ophisaurus attenuatus longicaudus*	--	D (S3)
Northern pine snake	*Pituophis melanoleucus*	--	T (S3)

[1]**Federal status abbreviations**: LE = Listed endangered, LT = Listed threatened; PS = Partial Status; C = Candidate; DM = Recovered, Delisted, and Being Monitored
State status abbreviations: E = Endangered; T = Threatened; D = In need of management; NOST = No status; SPCO = Special concern; TRKD = Tracked by state natural heritage program; S-CE = Special Concern - Commercially Exploited
State rank abbreviations: S1 = Critically imperiled, often with five or fewer occurrences, S2 = Imperiled, often with <20 occurrences; S3 = Rare or uncommon, often with <80 occurrences; S4 = Widespread, abundant, and apparently secure within the state, but with cause for long-term concern; SH = Of historical occurrence in Tennessee, e.g. formally part of the established biota, with the expectation that it may be rediscovered; SX = Believed to be extirpated from the state; S#S# = Denotes a range of ranks because the exact rarity of the element is uncertain (e.g., S1S2); S#B = Breeds in Tennessee; S#N = Occurs in Tennessee in a non-breeding status
Source: TVA 2016

In order to determine which of the species listed in each county are known to occur in the general vicinity of the reservoir, a more refined database search was conducted. Database searches are based on the following criteria: (1) distance, (2) element occurrence rank values, and (3) species or type of element present. Accordingly, plants are assessed within a 5-mile radius, aquatic species within a 10-mile radius, and terrestrial species within a 3-mile radius.

For information on threatened and endangered species and the potential impacts of the draft RLMP, see Volume I, Section 3.7.

2.2.5.1 Plants

Reviews of the TVA Natural Heritage database indicated that within the surrounding counties, there are three plant species listed as federally threatened or endangered, one proposed

threatened species, and one species deemed in need of management. There are an additional 50 plant species that are state-listed as threatened or endangered and 25 that are considered species of special concern (Table 2-4). Within 5-miles of the reservoir, there are three federally listed species and 14 additional state- listed species or species of concern. These species and their habitat requirements are discussed in Table 2-5.

Two species within Rock Island State Park have been recorded within a parcel proposed for allocation to Zone 6 (Developed Recreation) under the draft RLMP (Alternative B).

Table 2-5. Habitat Requirements for Plant Species of Conservation Concern within 5 Miles of Great Falls Reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
American barberry	Open woods, and on bluffs and cliff along river banks[2]	Yes
American ginseng	Rich moist hardwood dominated woods under a closed canopy[2]	Yes
Blomquist leafy liverwort	Rock and boulders in moist areas[2]	Yes
Butternut	Rich bottomland forests[2]	Likely
Cumberland rosemary	Gravel/cobble/boulder/sand bar sand river banks within in sunny riparian areas[2]	Likely
Deam's copperleaf	Mesic woods, sandbars[1]	Likely
Liverwort (*Radula volute*)	Damp shaded rocks along streams. 1772-3609 ft elevation[2]	Likely
Loesel's twayblade	Calcareous seeps[1]	Likely
Narrow-leaved wild leek	Rich woods[1]	Likely
Palamocladium	Moss. Seepy limestone cliffs and bluffs[1]	Yes Recorded in a TVA Zone 6 Parcel
Sharp's lejeunea	Rocks, boulders, bluffs, cliff faces. Usually limestone, sometimes sandstone or dolomite[2]	Likely
Shining ladies'-tresses	Alluvial woods and moist slopes[1]	Likely
Short-head rush	Seeps and wet bluffs[2]	Yes Recorded in a TVA Zone 6 Parcel
Virginia spiraea	Creek edges, gravel bars, rubble and boulders[2]	Likely
White fringeless orchid	Wet areas in acidic muck or sand. At the head of streams or seepage slopes[2]	Unlikely
Wood lily	Dry openings, frequently in powerline cuts[1]	Likely

Common Name	Habitat Requirements	Suitable Habitat Present
Yellow-eyed-grass	Pond margins and marshes[1]	Likely

[1] Source: TDEC 2014
[2] Source: NatureServe 2016

For information on plant communities and potential impacts of the draft RLMP, see Volume I, Section 3.5.3.

2.2.5.2 Terrestrial Wildlife

Reviews of the TVA Natural Heritage database indicate that there are three federally listed terrestrial species and 21 state-listed species, 16 of which are deemed in need of management in the counties surrounding Great Falls Reservoir (see Table 2-4). There are several other species that are being tracked by the state natural heritage program. Three federally listed species and eight additional state-listed species, or species in need of management, have been recorded within 3 miles of the reservoir (Table 2-6). An additional 20 tracked arachnid, diplopod, and insect species occur within 3 miles of the reservoir. These species and their habitat requirements are described in Table 2-6. No federally listed species have been recorded within TVA parcels. One state-listed species of concern has been recorded on a TVA parcel.

Table 2-6. Habitat Requirements for Wildlife Species of Conservation Concern within 3 Miles of Great Falls Reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
Arachnids		
A harvestman from Cummings Cove Cave (*Theromaster sp. 1*)	Terrestrial cave associate; known from one cave in the Cumberland Plateau; Van Buren County. Rare not state listed.[2]	Unlikely, only known from one cave, not on TVA parcel
Amphibians		
Barking treefrog	Low wet woods and swamps, sandy areas of pine savannas. Dependent on trees near water[1]	Likely in wetlands along the Caney Fork and Cummings River
Tennessee Cave salamander	Aquatic, cave obligate[1]	Potentially but, not known in the single cave on TVA parcels
Hellbender	Creeks and Rivers[1]	Potentially along the undammed portions of the Caney Fork and the Collins River
Birds		
Least bittern	Herbaceous wetland[1]	Potentially in wetlands along the Caney Fork
Common barn-owl	Nesting: cliffs, hollow trees, buildings, open forests Foraging: dense grass	Likely, however nearby records are historic

Common Name	Habitat Requirements	Suitable Habitat Present
	fields including marshes[1]	
Bald eagle	Forested areas near open water1. In TN, overwintering on reservoirs and large rivers[2]	Likely, one nest recorded in vicinity in 2010
Diplopods		
A cave obligate millipede *(Scoterpes ventus)*	Terrestrial cave obligate; wet caves of the Cumberland Plateau & Sequatchie Valley[2] Rare, not state listed	Potentially, but Unlikely, not known to occur in TVA cave
A cave obligate beetle *(Nelsonites walteri)*	Terrestrial cave obligate[2]	Potentially, but not known to occur in TVA cave
A cave obligate millipede *(Tetracion tennesseensis)*	Subterranean cave obligate[1]	Potentially, but not known to occur in TVA cave
Insects		
A cave cricket (*Hadenoecus opilionides*)	Caves[1]	Potentially, but not known to occur in TVA cave
A cave obligate beetle (*Pseudanophthalmus macradei*)	Terrestrial cave obligate[2]	Potentially, but not known to occur in TVA cave
A cave obligate beetle (*Pseudanophthalmus vanburenensis*)	Terrestrial cave obligate[2]	Potentially, but not known to occur in TVA cave
A cave obligate beetle (*Pseudanophthalmus robustus*)	Subterranean cave obligate[1]	Potentially, but not known to occur in TVA cave
A rove beetle (*Atheta lucifuga*)	Terrestrial cave associate; reported from two caves in the Cumberland Plateau; Van Buren County. Rare, not State Listed[2]	Potentially, but not known to occur in TVA cave
A rove beetle (*Aloconota diversiseta*)	Terrestrial cave obligate. Rare, not state listed[2]	Potentially, but not known to occur in TVA cave
A springtail *(Sinella cavernarum)*	Subterranean obligate[1]	Potentially, but not known to occur in TVA cave
A springtail from Indian Cave (*Folsomia sp.2 nr. Macrochaeta*)	Terrestrial cave obligate. Rare, not state listed[2]	Potentially, but not known to occur in TVA cave
A Viatica group springtail (*Hypogastrura sp. 1*)	Terrestrial cave obligate; Van Buren County; known from one cave in the Cumberland Plateau. Rare, not state listed[2]	Unlikely, only known from one cave, not on TVA parcel
Copeland's springtail (*Triacanthella copelandi*)	Terrestrial cave associate; middle Cumberlands; also reported from Great Smoky Mtns. Rare, not state listed[2]	Potentially, but not known to occur in TVA cave
Cumberland ground beetle (*Trechus cumberlandus*)	Terrestrial associate of caves, springs, sinkholes; escarpment of the Cumberland Plateau, generally. Rare, not state listed	Potentially, but not known to occur in TVA cave
Rumbling Falls Cave beetle (*Pseudanophthalmus sp. 27*)	Terrestrial cave obligate; middle Cumberlands; Van Buren & White counties. Rare, not state listed	Potentially, but not known to occur in TVA cave

Common Name	Habitat Requirements	Suitable Habitat Present
Rumbling Falls Cave dipluran (*Litocampa sp. 5*)	Terrestrial cave obligate, Cumberland Plateau escarpment. Rare, not state listed	Potentially, but not known to occur in TVA cave
Swamp River Cave Neanura (*Neanura sp. 1*)	Terrestrial cave obligate; Rumbling Falls area, Van Buren Co; known from a single cave. Rare, not state listed[2]	Unlikely, only known from one cave, not on TVA parcel
Swamp River Cave Onychiurus (*Onychiurus sp. 2*)	Terrestrial cave obligate, middle Cumberlands; reported from a single cave in Van Buren County. Rare, not state listed[2]	Unlikely, only known from one cave, not on TVA parcel
Swamp River Cave Pseudosinella (*Pseudosinella sp. 5*)	Terrestrial cave obligate. Rare, not state listed[2]	Unlikely, only known from one cave, not on TVA parcel
Mammals		
Allegheny woodrat	Rocky outcrops, cliffs. Usually at higher elevations[1]	Likely. Woodrats have been observed in a building on Parcel 2. May have been this species
Gray bat	Caves[1]	Likely foraging habitat over reservoir
Indiana bat	In winter, hibernacula are found in caves. During summer, roosts are found in wooded or semi wooded areas that have suitable trees with loose bark[1]	Summer roosting/foraging habitat likely
Rafinesque's big-eared bat	A woodland bat. Hibernation occurs in caves. Summer roosting occurs in hollow trees, buildings, under bridges or in culverts[1]	Yes. Located in a TVA Zone 2 Parcel. One record of this bat in a building at Great Falls Dam in June 2016
Northern long-eared bat	In winter, hibernacula are found in caves. During summer, roosts are found in wooded or semi wooded areas that have suitable trees with loose bark[1]	Summer roosting/foraging habitat likely

[1] Source: NatureServe 2016

[2] Source: TWRA 2016

For information on terrestrial wildlife and potential impacts of the draft RLMP, see Volume I, Section 3.5.4.

2.2.5.2.1 Amphibians

Due to the presence of scrub-shrub wetlands (as indicated by the National Wetlands Inventory) in and along the dammed portion of the Caney Fork River, there is potential for suitable habitat for the barking treefrog within the TVA parcels.

The Tennessee cave salamander is not likely to be found within the TVA parcels is not known from the one known cave within the parcels. However survey of this cave would be required to determine if this species or suitable habitat for this species is present on the TVA parcels.

Hellbenders can be found in creeks and rivers. There is a potential for this species to be found in the undammed sections of the rivers adjacent to the parcels.

2.2.5.2.2 Birds

Both the least bittern and barn owl have been recorded in the vicinity of the reservoir, however the records are historic. Nonetheless suitable habitat for both may exist on TVA parcels. Emergent and scrub-shrub wetlands within and along the Caney Fork could provide habitat for least bittern. Nesting cavities for barn owl may be present within the mature forested sections of the TVA parcels. A bald eagle nest was recorded in 2010 near the reservoir. Additional nesting habitat for bald eagle around the reservoir and in the TVA parcels is likely. Foraging habitat for common barn owl and Bald eagle occurs on TVA parcels.

2.2.5.2.3 Mammals

Allegheny woodrat has the potential to occur within the TVA parcel. A nesting woodrat was observed in a building at Rock Island State Park in 2016. Collection was not possible for confirmation of Allegheny woodrat species. Additional cave habitat on the TVA parcel may provide suitable habitat for this species.

Within 3 miles of Great Falls Reservoir, there are 407 known caves. Seven of these caves are known to provide roosting habitat for bats at least part of the year. Gray bats rely on caves year round. Due to large number of caves in the region, it is likely that gray bats could be found in the project area for foraging or roosting.

Indiana bats and northern long-eared bats roost in wooded areas in the summer. Because the TVA parcels have a high cover of mature forest, and there are winter records of Indiana bats and northern long-eared bats in the surrounding caves and summer records of northern long-eared bat in the surrounding landscape, it is likely that Indiana bats and northern long-eared bats could be found in the TVA parcels.

Rafinesque’s big-eared bats summer roosts include wooded areas as well as buildings, bridges, culverts, and other man-made structures. In 2016, a Rafinesque’s big-eared bat was observed in a building at Great Falls Dam. Additionally, there are records of these bats roosting in caves

within the region. Habitat for the Rafinesque's big-eared bat exits within the reservoir and TVA parcels.

2.2.5.2.4 Invertebrates

There are 20 species of rare terrestrial invertebrates being tracked within 3 miles of the reservoir. Most of these species are cave obligate and only known to exist in a few caves. None of these species have been recorded in the one cave on a TVA parcel. Surveys of the cave would be required to determine if any of these cave obligate species occur on the TVA parcel.

2.2.5.3 Aquatic Species

In the counties surrounding Great Falls Reservoir, there are seven federally listed aquatic animal species, six of which are listed as endangered. There are an additional 16 additional state-listed species, two of which are considered state endangered and five considered in need of management (Table 2-4). Within 10 miles of the reservoir, there are a total of 13 listed species (Table 2-7). There are no records of any listed aquatic species on TVA parcels, however, there are records of five listed species within Great Falls Reservoir.

Table 2-7. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Great Falls Reservoir

Common Name	Habitat Requirement	Suitable Habitat Present
Fish		
Bedrock shiner*	Bedrock pools of headwaters and streams. Tolerates stagnant conditions[2]	Record within southern tributary. Unlikely to be found in TVA parcels
Bluemask darter*	Streams with slow to moderate current over clean sand and fine gravel; Caney Fork River system (above Great Falls Reservoir)[1]	In southern and eastern tributaries. Unlikely to be found within TVA parcels
Cherry darter	Gravel riffles of creeks and small rivers. Often in springs and bedrock pools[1]	Unlikely to be found within TVA parcels
Flame chub	Springs and spring fed streams[1]	Unlikely to be found within TVA parcels
Redband darter	Limestone streams; Nashville Basin & portions of Highland Rim[1]	Unlikely to be found within TVA parcels
Sooty darter	Small streams with slabrock on limestone bedrock; Nashville Basin tributaries to Cumberland and lower Caney Fork rivers[1]	Unlikely to be found within TVA parcels
Southern cavefish*	Aquatic cave obligate; cave streams, karst waters, and water supply wells; reported from all karst regions excluding Blue Ridge and Ridge and Valley[1]	One record from 1960 below dam. Unlikely as there are no aquatic caves within the parcels
Gastropod		
Cupped vertigo	In leaf litter and moss on forested hillsides;	Habitat likely

Common Name	Habitat Requirement	Suitable Habitat Present
	Blue Ridge; Monroe County [2]	
Ornate rocksnail	Large rivers, does not readily adapt to reservoirs	Unlikely
Umbilicate river snail	Freshwater[1]	Unknown
Insects		
Yeatmans Groundwater Copepod (*Diacyclops yeatmani*)	Aquatic cave obligate; central southern Cumberlands generally; possibly part of a species complex. Rare, not state listed[2]	Potentially, but not known to occur in TVA cave
Mussels		
Cumberland pigtoe*	Shallow gravel riffles of small to medium rivers[2]	Record in Cane Creek unlikely to be found in TVA parcels
Little-wing pearlymussel*	Cool, clear, high-gradient streams in sand, gravel, and cobble substrates, riffles; portions of Cumberland and upper Tennessee river system[1]	Record in Cane Creek unlikely to be found in TVA parcels

[1] Source: TDEC 2014
[2] Source: NatureServe 2016
* Records within Reservoir

For information on aquatic species and potential impacts of the draft RLMP, see Volume I, Section 3.6.

2.2.6 Water Quality

TDEC establishes water quality standards for individual waterbodies by identifying the most stringent criteria for each assigned use and considering the antidegradation status. The seven designated uses for the waterways of the State are defined in Rules of Tennessee Department of Environment and Conservation, Chapter 0400-40-04 and include: domestic water supply, industrial supply, fish and aquatic life, trout stream, naturally reproducing trout stream, livestock watering and wildlife, and irrigation. Waterbodies in Tennessee that do not fully support their designated uses based on a review of water quality data and information are considered to be impaired and included in the 303(d) list.

TVA does not conduct a reservoir health rating for the Great Falls Reservoir. However, TDEC has assessed the reservoir (water body ID TN0513010802217.6 – 1000) and found the water quality meets the standards for TDEC's designated uses for Great Falls (TDEC 2016). Great Falls Reservoir is categorized by TVA as a storage reservoir with storage used primarily for hydroelectric power generation, and has no designated flood storage volume.

It is noted however, that the segment of Caney Fork River immediately downstream of the Great Falls dam (water body ID TN05130108025 – 1000 TN0513010802217.6 – 1000) is impaired due to the presence of the reservoir and operations which cause streamflow decreases and habitat impacts (TDEC 2016). An 8.7-mile long segment of Rocky River (TN05130108024-1000), a tributary to Great Falls near the dam, is identified as a sediment impaired stream. Higher in the Great Falls watershed, segments of Rocky River, Dry Fork and Piney Creek are assessed as impaired due to abandoned mine lands (TDEC 2016).

For information on water quality and potential impacts of the draft RLMP, see Volume I, Section 3.8.

2.2.7 Wetlands

Wetlands are transitional ecosystems between terrestrial and aquatic communities, where saturation with water is the dominant factor in determining the types of plants and animals present. Wetlands are ecologically important because of their beneficial effect on water quality, their moderation of flow regimes by retaining and gradually releasing water, their value as wildlife habitat, and as areas of botanical diversity. Wetlands exist within and adjacent to TVA reservoirs and are influenced by surface water and groundwater connections to the water levels in these reservoirs. The presence of wetlands immediately on or adjacent to TVA reservoirs is related to the land use characteristics and development status of the shoreline. Lands supporting more intense shoreline development are typically noted as having a decrease in wetland features.

Emergent wetlands typically occur in a narrow elevation zone centered on the summer pool elevation and contain water for much of the growing season. Vegetation typically includes cattail, bulrush, arrowhead, and water plantain. Scrub-shrub wetlands are typically associated with reservoir shorelines and coves and are often transition zones between emergent and forested wetlands. The vegetation can include hardwood trees less than 15 feet-tall but are dominated by shrubs such as silky dogwood, red osier dogwood, buttonbush, alder, willow, and elderberry. Forested wetlands occur on lower-lying, undisturbed areas and along tributary streams on power generation sites. These areas are dominated by flood tolerant hardwood species such as oaks, maples, and ash.

Vegetated wetlands occur with greater frequency and size along the mainstem reservoirs and tailwaters than along the tributary reservoirs and tailwaters, such as Great Falls. This is due in part to the larger-sized watersheds of mainstem reservoirs resulting in a greater volume of

water; greater predictability of the annual hydrologic regime; shoreline and drawdown zone topography (wider and flatter floodplains, riparian zones, and drawdown zones and large areas of shallow water); and larger sections of relatively still, shallow-water areas. Wetlands tend to be smaller and do not occur as frequently on tributary reservoirs because of the relatively steep drawdown zones, the rolling to steep topography of adjacent lands, shoreline disturbance caused by wave action, and the lower predictability and shorter duration of summer pool levels. On tributary reservoirs, wetlands are typically located at the backs of coves where tributary streams enter the reservoir and in very patchy, small (less than 0.01 acre) areas along the shoreline.

The information presented in this document is derived from the National Wetland Inventory database and supplemented with previous on-the-ground surveys done by TVA, including for the SMI EIS (TVA 1999). Field surveys were not performed for this RLMP to gather more up-to-date information regarding the types and locations of wetlands within the Great Falls Reservoir. The only types of wetlands mapped within the Great Falls Reservoir besides open water are emergent and scrub-shrub (Table 2-8).

Table 2-8. Wetland Types within the Great Falls Reservoir

Wetland Type	Acres
Emergent	2.2
Scrub-Shrub	1.1
Open Water	5.0
Total	**8.3**

Source: USFWS 2016

Some of the wetland areas within the reservoir are present in local, state, and federally managed areas including wildlife refuges, wildlife management areas, national forests, parks, and recreation areas; and TVA-designated sites including small wild areas, habitat protection areas, and ecological study areas (Section 2.2.11).

For more information on wetlands and the potential impacts of the draft RLMP, see Volume I, Section 3.9.

2.2.8 Floodplains

The area encompassed by the RLMP extends from the lower limit of TVA's property, just below the Great Falls Dam at approximate Caney Fork mile (CFM) 90.2, upstream to about

CFM 109.9. Great Falls Dam is located at CFM 91.1. The 100-year floodplain is the area that would be inundated by the 100-year flood (base flood).

In Great Falls Reservoir, the 100-year flood elevations for the Caney Fork vary from 815.5 feet msl at the Great Falls Dam at CFM 91.1 to elevation 822.2 feet msl at CFM 109.9. The 500-year flood elevations vary from 820.0 feet msl at CFM 91.1 to 827.7 feet msl at CFM 109.9.

Tabulations of the 100- and 500-year flood elevations are included in Volume I, Appendix D. For more information on the potential impacts of the draft RLMP on floodplains, see Volume I, Section 3.10.

2.2.9 Air Quality

In accordance with the Clean Air Act Amendments of 1990, all counties that include parts of the Great Falls Reservoir are designated with respect to compliance, or degree of noncompliance, with the National Ambient Air Quality Standards (NAAQS). The NAAQS have been established to protect the public health and welfare with respect to six pollutants: particulate matter, sulfur dioxide, carbon monoxide, ozone, nitrogen dioxide, and lead. An area with air quality better than the NAAQS is designated as “attainment;” an area with air quality worse than the NAAQS is designated as “non-attainment.” Warren and White counties are considered in attainment for all NAAQS. The Mammoth Cave National Park is a designated Prevention of Significant Deterioration Class I air quality area approximately 89 miles from the Great Falls Reservoir and is afforded special protection. General information about air emissions and climate change are identified in Volume I, Section 3.11.

Sources of air emissions within TVA lands along the Great Falls Reservoir occur at the park and dam facilities and from truck and vehicle transportation.

Currently, air emissions from uses on TVA lands on the Great Falls Reservoir are low. Future projects that have the potential to affect ambient air quality would be planned in detail to minimize air emission impacts and would comply with Clean Air Act regulations.

For information on air quality and the potential impacts of the draft RLMP, see Volume I, Section 3.11.

2.2.10 Cultural and Historic Resources

Cultural resources include prehistoric and historic archaeological sites, districts, buildings, structures, and objects, as well as locations of important historic events that lack material

evidence of those events. Cultural resources that are listed, or considered eligible for listing, on the National Register of Historic Places (NRHP) are called historic properties. To be considered an historic property, a cultural resource must possess both integrity and significance. A historic property's integrity is based on its location, design, setting, materials, workmanship, feeling, and association. The significance is established when historic properties meet at least one of the following criteria: (a) are associated with important historical events or are associated with the lives of significant historic persons; (b) embody distinctive characteristics of a type, period, or method of construction; (c) represent the work of a master, or have high artistic value; or (d) have yielded or may yield information important in history or prehistory (36 CFR Part 60.4).

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effects of their proposed undertakings on historic properties and provide the Advisory Council on Historic Preservation an opportunity to comment on those effects. TVA determined that the draft RLMP (Alternative B) is an "undertaking" as defined by the regulations under NHPA. Once an action is determined to be an undertaking, the regulations require agencies to consider whether the proposed activity has the potential to impact historic properties. If the undertaking is such an activity, then the agency must follow the following steps: (1) involve the appropriate consulting parties; (2) define the area of potential effects (APE); (3) identify historic properties in the APE; (4) evaluate possible effects of the undertaking on historic properties in the APE; and (5) resolve adverse effects. (36 CFR § 800.4 through 800.13.). An APE is defined as the "geographic area or areas within which the undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist." (36 CFR § 800.16.). Concerning cultural resources, the APE is taken as the affected environment for purposes of this EIS. TVA defined the APE to be the area where TVA is proposing in its draft RLMP to change the current Zone allocation (Alternative A).

Section 106 of the NHPA requires federal agencies to consult with the respective State Historic Preservation Officer (SHPO) and Indian tribes when proposed federal actions could affect historic and cultural resources, including archaeological resources, which are also protected under the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act, in addition to the NHPA.

2.2.10.1 Archaeological Resources

The Great Falls Reservoir region has been an area of human occupation for the last 12,000 years. This includes five broad cultural periods: Paleo-Indian (>12,000-8,000 BC),

Archaic (8000-1600 BC), Woodland (1600 BC-AD 1000), Mississippian (AD 1000-1700), and Historic (AD 1700-present). These divisions are based on stylistic changes in artifact types and technological and cultural adaptations. Prehistoric land use and settlement patterns vary during each period, but short- and long-term habitation sites are generally located on flood plains and alluvial terraces along rivers and tributaries. Specialized campsites tend to be located on older alluvial terraces and in the uplands. The influx of European settlers into this region resulted in the establishment of Warren County in 1807. The early economy of the county was based on agriculture with industrial development following the surrounding regional trends of timbering and mining through the 19th century (Dillon 2009). The Civil War destroyed some of this early infrastructure and commercial development. Post-Civil War economic development saw a continuation of timbering and mining with the later edition of textile manufacturing. The creation of Great Falls Dam ushered in electrification in the county and facilitated further industrial development.

The Great Falls Reservoir area did not experience the same archaeological interest as TVA's larger reservoirs. Much of what we know about the prehistory of the Great Falls Reservoir area comes from archaeological investigations from surrounding areas. Archeological sites along Great Fall Reservoir tend to be open habitation, rockshelters, and caves that were recorded in the late 1970's and 1980's. In 2016, 28 acres of TVA land at Great Falls was subjected to an intensive archaeology survey by TVA. The archaeological survey, completed in August 2016, was conducted to consider potential impacts from a proposed roadway realignment on TVA land running along the Caney Fork River in Warren County, Tennessee. Two historic cemeteries and an archaeological site (40WR125) were identified during the survey. Site 40WR125 consists of dispersed prehistoric stone tools and manufacturing debris and the visible remains of 18 different historic structures possibly associated with the late nineteenth century Great Falls Cotton Mill and the early twentieth century Great Falls Hydroelectric Dam construction.

2.2.10.2 Historic Structures

Great Falls Dam was listed on the National Register of Historic Places in 1989 for its significance to Pre-TVA Hydroelectric Development in Tennessee. The acquisition of land for Great Falls Reservoir may have resulted in the removal of many structures and other man-made features. The few structures that remain likely represent all historical periods including individual farmsteads and industrial sites such as mills. However, many of these structures' NRHP eligibility has not been assessed, and a complete survey for historic structures has not been conducted. However, as noted above, a TVA survey completed in 2016 found the visible

remains of 18 historic structures. The presence of other historic structures on Great Falls Reservoir cannot be ruled out until a historic structure inventory has been conducted as part of a project-specific environmental review (all projects occurring on TVA land receive such a review as part of the NEPA and Section 106 processes). Furthermore, many historic structures remain on adjacent non-TVA land that may be indirectly impacted by activities on TVA land.

2.2.11 Natural Areas and Ecologically Significant Sites

Natural areas include managed areas, ecologically significant sites, and Nationwide Rivers Inventory (NRI) streams. Managed areas include lands held in public ownership that are managed by an entity (e.g., U.S. Army Corps of Engineers, State of Tennessee) to protect and maintain certain ecological and/or recreational features. A management plan or similar document defines what types of activities are compatible with the intended use of the managed area. Ecologically significant sites are tracts of privately owned land that are either recognized by resource biologists as having significant environmental resources or identified tracts on TVA lands that are ecologically significant, but not specifically managed by TVA's Natural Areas Program. NRI streams are free-flowing segments of rivers recognized by the U.S. National Park Service as possessing outstandingly remarkable natural or cultural values that may potentially qualify them as part of the National Wild and Scenic Rivers System.

The TVA Natural Heritage database indicates that there are three natural areas on or within TVA parcels along Great Falls Reservoir. The areas include Center Hill Lake, Great Falls Reservoir Reservation, and Rock Island State Park. An additional 16 natural areas lie within 3 miles of Great Falls Reservoir. For more information on managed areas and sensitive ecological sites, see Volume I of the EIS, Section 3.13 and Appendix D.

2.2.12 Aesthetic and Visual Resources

Visual resources within the Great Falls Reservoir are not unusually unique on a state, regional, or national level. The area surrounding Great Falls Reservoir is a scenic wilderness with numerous waterfalls, including the one that gives the reservoir its name. Great Falls is a 30-foot-tall horseshoe cascading waterfall, located below the 19th century cotton textile mill that it powered over 100 years ago. Whitewater rapids below the dam are world-renowned for kayaking and canoeing and have been the site for national and international paddling events.

The area surrounding the reservoir is rural and the shoreline of the reservoir is primarily comprised of forested areas, parks, and developed recreational areas. Downstream of Great Falls Dam is Rock Island State Park, which includes the rugged beauty of the Caney Fork

Gorge. The overlooks in this area are some of the most scenic and significant along the Eastern Highland Rim. The Caney Fork River Gorge contains scenic overlooks, waterfalls, deep pools and limestone paths perfect for hiking, swimming, fishing, kayaking, and exploring.

For information on these resources and the potential impacts of the draft RLMP, see Volume I, Section 3.14.

2.2.13 Noise

Sources of noise within lands along the Great Falls Reservoir include those associated with forested areas, residential development, suburban areas, parks, farmed areas, and recreational areas. Characteristics of noise emissions associated with common land uses are identified in Volume I of the EIS, Section 3.15.

TVA owns two parcels on this reservoir, one would be allocated to Zone 6 (Developed Recreation), which consists of Rock Island State Park and the other parcel is allocated as Zone 2 (Project Operations), which consists of the Great Falls Dam Reservation. Rock Island State Park supports passive recreation and camping. Traffic in this area may result in noise within vicinity of the access roads and parking areas. The bulk of the noise emitted from the Great Falls Dam and powerhouse is related to the release of water and the noise emissions from the powerhouse. Noise from these sources will attenuate with distance from the source and as such, the noise levels associated with TVA lands around the reservoir is relatively low.

2.2.14 Socioeconomics and Environmental Justice

2.2.14.1 Population and Economy

The population of the two county area that contains the Great Falls Reservoir is described in Table 2-9. Warren County had a population of 40,435 in 2015 while White County had a population of 26,521. Neither of the two counties had population growth rates exceeding the state of Tennessee's 3.9 percent from 2010 to 2015. Both of the counties in the area contain rural population percentages, which are nearly double the 33.6 percent rural population percentage of the states. Warren County has a 61.4 percent rural population and White County has a 78.2 percent rural population. Although relatively rural, the 2015 to 2020 projected growth rate of 23.8 percent for Warren County far exceeds the projected rates of 6.3 percent for White County and 8.3 percent for the state of Tennessee.

Table 2-9. Population and Percent Growth – Great Falls Reservoir

Population	County		State
	Warren	White	Tennessee
Population (2020 - Projection)	50,056	28,185	7,195,375
Population (2015 - Estimate)	40,435	26,521	6,600,299
Population (2014 - Estimate)	39,867	26,086	6,451,365
Population (2010)	39,839	25,841	6,346,105
Projected Growth (2015-2020)	23.8%	6.3%	8.3%
Percent Change (2010-2015)	1.5%	2.6%	3.9%
Percent Change (2010-2014)	0.1%	0.9%	1.6%
Percent Rural (2010)	61.4%	78.2%	33.6%

Sources: USCB 2015 and USCB 2010a

As presented in Table 2-10, from 2010 to 2014, an average of 5.5 percent of the population was unemployed within the Great Falls Reservoir area. The state of Tennessee during that same period had an unemployment rate of 6 percent. For both counties, employment was generally within three sectors: Management and Business Science, and Arts; Sales and Office; and Production, Transportation, and Material Moving. When compared to the median household income of $44,621 for the state of Tennessee, Warren and White counties are significantly lower. The median household income between 2010 and 2014 for Warren County was $34,592 and $33,933 for White County.

Table 2-10. Employment and Income, 2010-2014 – Great Falls Reservoir

Employment and Income	County		State
	Warren	White	Tennessee
Civilian Employed Population 16 Years and Over	15,870	9,907	2,835,895
Management and Business Science and Arts	26%	23%	34%
Service Occupations	16%	19%	17%
Sales and Office	22%	21%	25%
Natural Resources, Construction, and Maintenance	12%	13%	9%
Production, Transportation and Material Moving	24%	24%	15%
Percent of Population > 16 years Unemployed	5%	6%	6%
Median Household Income	$34,592	$33,933	$44,621

Source: USCB 2010b

2.2.14.2 Environmental Justice

EO 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" formally requires Federal agencies to incorporate Environmental Justice as part of NEPA. Specifically, it directs them to address, as appropriate, any disproportionately high and adverse human health or environmental effects of their actions, programs, or policies on minority and low-income populations. Although TVA is not one of the agencies subject to this order, TVA routinely considers Environmental Justice impacts as part of the project decision-making process.

The minority population within the Great Falls Reservoir area is lower than the state of Tennessee's which has a minority population of 25.4 percent (Table 2-11). The percent minority within Warren County is 13.9 whereas White County has a rate half as much at 6.0 percent. Both Warren and White counties have higher poverty rates than the state of Tennessee. The percent of the population below the poverty level for 2010 to 2014 in Warren County was 21.5 percent and 22.1 percent in White County. The state of Tennessee's poverty rate was only 17.8 percent during that same time period.

Table 2-11. Minority Population and Poverty, 2010-2014– Great Falls Reservoir

Minority Population and Poverty	County		State
	Warren	White	Tennessee
Total Population	39,867	26,086	6,451,365
White Alone[1]	36,539	25,002	5,029,109
Black or African American Alone[1]	638	469	1,082,001
American Indian and Alaska Native Alone[1]	76	25	17,656
Asian Alone[1]	224	10	98,441
Native Hawaiian and Other Pacific Islander Alone[1]	12	0	3,256
Two or More Races	1,315	563	122,662
Hispanic or Latino[2]	3,275	497	309,828
Percent Minority	13.9%	6.0%	25.4%
Percent of Population Below Poverty Level	21.5%	22.1%	17.8%

[1]Includes persons reporting only one race
[2]Hispanics may be of any race, so also are included in applicable race categories.
Source: USCB 2010b

For information on socioeconomics and the potential impacts of the draft RLMP, see Volume I, Section 3.15 of the EIS.

2.3 The Future Management of Reservoir Lands

Varying types of land management or conservation techniques coupled with development could occur along Great Falls Reservoir. Business opportunity, overall economy, local incentives, and community planning practices are factors that could contribute to the types of industry locating or expanding along the reservoir. Recreation demand is driven by population levels, recreation participation rates, changing preferences for different types of recreation, and innovations in recreation equipment. As noted above (Section 2.2.2) and below under the description of Parcel 2 (Chapter 4), the State of Tennessee has requested that TVA grant a term easement over the 343-acre Parcel 2 in order to provide additional developed recreation opportunities. TVA is currently considering this proposal.

This page intentionally left blank

CHAPTER 3. LAND PLANNING PROCESS

3.1 Process for Planning Land

The reservoir land management planning process involves allocation of TVA fee-owned land to seven defined land use zones. The term “land use zone” refers to a descriptive set of criteria given to distinct areas of land based on location, features, and characteristics. The land use zone definitions listed in Table 3-1 are identical to those listed in the NRP (TVA 2011). The definition of a land use zone provides a clear statement of how TVA will manage public land and allocation of a parcel to a particular land use zone identifies that land for specific uses. Implementation of an RLMP minimizes conflicting land uses and makes it easier to handle requests for use of public land.

This draft RLMP was developed by a team of land managers and technical experts from TVA, knowledgeable about the reservoir and its resources. The planning team made land use decisions by integrating public needs, environmental conditions, economic benefits, state and federal policies, and the original congressional intent of the Great Falls Reservoir project. The process includes information from resource data, computer analysis, the public, other agencies, and knowledgeable TVA staff. This draft RLMP is consistent with the strategic direction of the NRP and the objections of the CVLP. Furthermore, the categorization and management of TVA-owned shoreline access land along Great Falls Reservoir tiers from the SMI EIS (TVA 1999).

The planning process is completed once TVA conducts an environmental review of the draft RLMP as well as reasonable alternatives, in compliance with NEPA. This process allows the public and intergovernmental partners to review TVA’s proposed allocations and provide input.

Table 3-1. Land Use Zone Definitions

Zone	Definition
Zone 1 Non-TVA Shoreland	Shoreland that TVA does not own in fee. This land may be privately owned or owned by a governmental entity other than TVA. Uses of this non-TVA land may include residential, industrial, commercial, and/or agricultural. In many instances, TVA may have purchased the right to flood and/or limit structures on this non-TVA land (i.e., flowage easement). TVA’s permitting authority under Section 26a of the TVA Act applies to construction of structures on non-TVA shoreland. Non-TVA shoreland allocations are based on deeded rights and, therefore, will not change as a result of the lands planning process. This category is provided to assist in comprehensive evaluation of potential environmental impacts of TVA’s allocation decision.

Zone	Definition
Zone 2 Project Operations	Land currently used, or planned for future use, for TVA operations and public works projects, including: • Land adjacent to established navigation operations — Locks, lock operations and maintenance facilities, and the navigation work boat dock and bases. • Land used for TVA power projects operations — Generation facilities, switchyards, and transmission facilities and rights-of-way. • Dam reservation land — Areas acquired and managed for the primary purpose of supporting the operation and maintenance of TVA dams and associated infrastructure; secondary uses may also include developed and dispersed recreation, maintenance facilities, miscellaneous TVA field offices, research areas, and visitor centers. • Navigation safety harbors/landings — Areas used for tying off commercial barge tows and recreational boats during adverse weather conditions or equipment malfunctions. • Navigation dayboards and beacons — Areas with structures placed on the shoreline to facilitate navigation. • Public works projects — Includes rights-of-way for public utility infrastructure, such as sewer lines, water lines, transmission lines, and major highway projects.
Zone 3 Sensitive Resource Management	Land managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment. Recreational natural resource activities, such as hunting, wildlife observation, and camping on undeveloped sites, may occur in this zone, but the overriding focus is protecting and enhancing the sensitive resource the site supports. Areas included are: • TVA-designated sites with potentially significant archaeological resources. • TVA public land with sites/structures listed in or eligible for listing in the National Register of Historic Places**.** • Wetlands — Aquatic bed, emergent, forested, and scrub-shrub wetlands as defined by TVA. • TVA public land under easement, lease, or license to other agencies/individuals for resource protection purposes. • TVA public land fronting land owned by other agencies/individuals for resource protection purposes. • Habitat protection areas — These TVA natural areas are managed to protect populations of species identified as threatened or endangered by the U.S. Fish and Wildlife Service, state-listed species, and any unusual or exemplary biological communities/geological features. • Ecological study areas — These TVA natural areas are designated as suitable for ecological research and environmental education by a recognized authority or agency. They typically contain plant or animal populations of scientific interest or are of interest to an educational institution that would utilize the area. • Small wild areas — These TVA natural areas are managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural, scenic, or aesthetic qualities that can also support dispersed, low-impact types of outdoor recreation.

Zone	Definition
	• River corridor with sensitive resources present — A river corridor is a segment of a river and the adjacent land along the banks. River corridors often consist of a linear green space of TVA land serving as a buffer to tributary rivers entering a reservoir. These areas will be included in Zone 3 when identified sensitive resources are present. • Significant scenic areas — Areas designated for visual protection because of their unique vistas or particularly scenic qualities. • Champion tree site — Areas designated by TVA as sites that contain the largest known individual tree of its species in that state. The state forestry agency "Champion Tree Program" designates the tree, while TVA designates the area of the sites for those located on TVA public land. • Other sensitive ecological areas — Examples of these areas include heron rookeries, uncommon plant and animal communities, and unique cave or karst formations.
Zone 4 Natural Resource Conservation	Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Areas included are: • TVA public land managed for wildlife or forest management projects. • TVA public land under easement, lease, or license to other agencies for wildlife or forest management purposes. • TVA public land fronting land owned by other agencies for wildlife or forest management purposes. • Dispersed recreation areas maintained for passive, dispersed recreation activities, such as hunting, hiking, bird watching, photography, primitive camping, bank fishing, and picnicking. • Shoreline conservation areas — Narrow riparian strips of vegetation between the water's edge and TVA's back-lying property that are managed for wildlife, water quality, or visual qualities. • Wildlife observation areas — TVA natural areas with unique concentrations of easily observed wildlife that are managed as public wildlife observation areas. • River corridor without known sensitive resources present — A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. River corridors will be included in Zone 4 unless sensitive resources are known to be present (see Zone 3). • Islands where sensitive resources are not known to be present or that support existing development.
Zone 5 Industrial	Land currently used, or planned for future use, for economic development, including businesses in distribution/processing/assembly and manufacturing. Preference will be given for businesses requiring water access. There are two primary types of uses for TVA land allocated for Industrial: (1) access for water supply or structures associated with navigation such as barge terminals, mooring cells, etc., or (2) land-based development potential. Areas included are: • TVA public land under easement, lease, or license to other agencies/individuals/ entities for industrial purposes.

Zone	Definition
	• TVA public land fronting land owned by other agencies/individuals/entities for industrial purposes. In some cases, TVA land allocated to industrial use would be declared surplus and sold at public auction. Types of development that can occur on this land are: • Industry — Manufacturing, fabrication, and distribution/processing/assembly involving chemical, electronics, metalworking, plastics, telecommunications, transportation, and other industries. Industry does not include retail or service-based businesses. • Industrial access — Access to the waterfront by back-lying property owners across TVA property for water intakes, wastewater discharge, or conveyance of commodities (i.e., pipelines, rail, or road). Barge terminals are associated with industrial access corridors. • Barge terminal sites — Public or private facilities used for the transfer, loading, and unloading of commodities between barges and trucks, trains, storage areas, or industrial plants. • Fleeting areas — Sites used by the towing industry to switch barges between tows or barge terminals that have both offshore and onshore facilities. • Minor commercial landing — A temporary or intermittent activity that takes place without permanent improvements to the property. These sites can be used for transferring pulpwood, sand, gravel, and other natural resource commodities between barges and trucks.
Zone 6 Recreation	Land currently used, or planned for future use, for concentrated, active recreational activities that require capital improvement and maintenance of developed infrastructure, including: • TVA public land developed for recreational purposes, such as campgrounds, day use areas, etc. • TVA public land under easement, lease, or license to other agencies/individuals/entities for developed recreational purposes. • TVA public land fronting land owned by other agencies/individuals/entities for developed recreational purposes. Residential use, long-term accommodations, and/or individually owned units are not permitted on land allocated for developed recreation. Types of development that can occur on this land are: • Public recreation — Recreation amenities developed and owned by a public agency that are open to the public. Public recreation areas may have varying levels of development, ranging from a water access site (e.g., launching ramp) to a marina facility. Facilities at public recreation areas could include playgrounds/play structures, picnic facilities, tennis courts, horseshoe areas, play courts, recreation centers, trails, greenways, natural areas, amphitheaters, food concessions (vending, snack bar), access to water for fishing and boating, swimming areas and swimming pools, launching ramps, courtesy piers, canoe access, marina facilities owned by the public entity, parking, and campgrounds. Cabins or other overnight accommodations (other than campgrounds) are only permitted if the public recreation area is operated by a state or state agency as a component of a state park system. • Public recreation areas and facilities are typically owned and operated by the federal, state, county, or local government. However, private

Zone	Definition
	entities may operate recreation facilities on public recreation land as concessionaires under agreement with the public entity controlling the property. The use of the facilities may be offered free or for a fee. Time-forward, public-private partnerships where facilities are owned by private investors will not be approved on public recreation land. All structures and facilities should be owned by the public entity. • Commercial recreation — Recreation amenities that are provided for a fee to the public intending to produce a profit for the private owner/operator. These primarily water-based facilities typically include marinas and affiliated support facilities such as stores, restaurants, campgrounds, and cabins and lodges. Where applicable, TVA will require appropriate compensation for the commercial use of the property.
Zone 7 Shoreline Access	TVA-owned land where Section 26a applications and other land use approvals for residential shoreline alterations are considered in accordance with TVA's Shoreline Management Policy. Types of development/management that may be permitted on this land are: • Residential water use facilities, e.g., docks, piers, launching ramps/driveways, marine railways, boathouses, enclosed storage space, and nonpotable water intakes. • Shoreline access corridors, e.g., pathways, wooden steps, walkways, or mulched paths that can include portable picnic tables and utility lines. • Shoreline stabilization, e.g., bioengineering, riprap, gabions, and retaining walls. • Shoreline vegetation management.

Prior to proposing parcel allocations, the TVA planning team reviewed the characteristics of each parcel (i.e., location and existing conditions). The planning team honored all existing commitments—that is, existing leases, licenses, and easements. No sensitive resources surveys were conducted on committed land. The remaining parcels were proposed to be allocated based on reservoir planning objectives and public input. Proposed management of each parcel was made by consensus among the TVA planning team. When developing the proposed RLMPs, the planning team identified proposed allocations and used the zone definitions listed above to reach consensus on the proposed allocations of the reservoir land.

In developing draft RLMPs, TVA typically proposes to allocate lands currently committed to a specific use to a zone compatible with that use unless there is an overriding need to change the use. Land currently committed to a specific use was allocated to a zone compatible with that use unless there was an overriding need to change the use. Some committed land uses are determined by the covenants and provisions of easements, leases, licenses, and sale and transfer agreements. Committed lands include the following: properties where TVA has granted land rights (easements, leases, etc.) for specific uses, properties where TVA has previously

identified resources in need of protection, Project Operations lands (transmission lines, dam reservations, public infrastructure, etc.), and lands fronting wildlife management areas. Possible reasons to change a committed land use would be to prevent or remedy ongoing adverse impacts resulting from the actions of a license or easement holder.

All of the TVA land surrounding Great Falls Reservoir (approximately 362.3 acres) are committed due to existing TVA or other public infrastructure projects. Agricultural licenses are not considered as committed uses because they are an interim use of TVA land.

3.2 Great Falls Reservoir Goals and Objectives

The NRP established long–term land planning goals and objectives. While these goals and objectives were established to guide planning decisions across the Valley, these same goals and objectives can be applied when planning specific reservoirs.

Goal

TVA will strive to continue to balance shoreline development, recreational use, sensitive and natural resource management, industrial use and other land uses in a way that maintains the quality of life and other important values across the region.

Objectives

Apply a systematic method of evaluating and identifying the most suitable uses of TVA public lands using resource data, stakeholder input, suitability and capability analyses, and TVA staff input.

- Identify land use zone allocations to optimize public benefit and balance competing demands for the use of public lands.
- Identify land use zone allocations to support TVA's broad regional resource development mission. TVA reservoir properties are managed to provide multiple public benefits, including recreation, conservation, and economic development.
- Provide a clear process by which TVA will respond to requests for use of TVA public land.
- Comply with federal regulations and executive orders.

- Enhance the protection of significant resources, including threatened and endangered species, cultural resources, wetlands, unique habitats, natural areas, water quality, and the visual character of the reservoir.

- Provide a mechanism that allows local, state, and federal infrastructure projects when the use is compatible with the zone allocation.

3.3 Parcel Allocations

TVA's land planning process (Section 3.1) along with the goals and objectives specific to Great Falls Reservoir (Section 3.2) were used to develop this draft RLMP. Through this process, TVA proposes allocations for each reservoir parcel to one of the seven planning zones as indicated in Table 3-2.

Table 3-2. Summary of Proposed Land Use Allocations for Great Falls Reservoir Land Management Plan (Alternative B)

Allocation Designation		Number of Parcels	Acres
Zone 2	Project Operations	1	19.0
Zone 3	Sensitive Resource Management	0	0
Zone 4	Natural Resource Conservation	0	0
Zone 5	Industrial	0	0
Zone 6	Developed Recreation	1	343.4
Zone 7	Shoreline Access	0	0
Total		**2**	**362.4**

Figure 3-1 represents the percent of land acreage on Great Falls Reservoir that would be allocated to each land use zone.

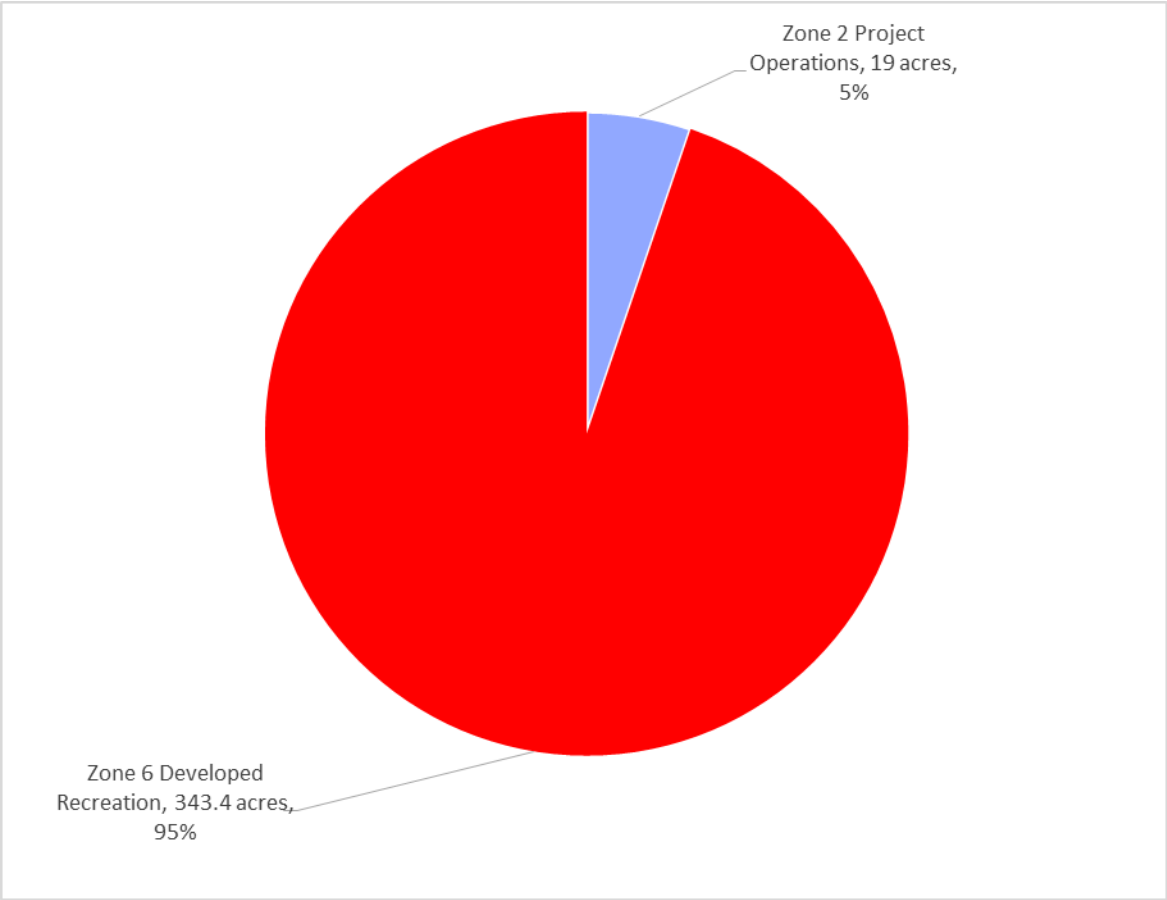


Figure 3-1. Percent of Great Falls Reservoir Acreage Allocated by Zone

TVA owns only two parcels on this reservoir, one is proposed to be allocated to Zone 6 (Developed Recreation) which consists of Rock Island State Park and is managed by the State of Tennessee. The other parcel is proposed to be allocated as Zone 2 (Project Operations), which consists of the Great Falls Dam Reservation. The dam reservation parcel receives heavy informal public use and includes the dam powerhouse and associated access roads, transmission lines and substations. The Great Falls Dam and powerhouse are historically significant structures and are eligible for listing on the National Register of Historic Places (NRHP). See Appendix B for a description of proposed parcel allocations.

When TVA developed its CVLP in 2011, it was anticipated that the entire TVA property footprint on Great Falls would be allocated to Zone 2 (Project Operations). However, this draft RLMP proposes to allocate most of the TVA property to Zone 6 (Developed Recreation) to reflect existing and potential future public recreation use and operation by the State of Tennessee.

Table 3-3. Draft Great Falls Reservoir Land Management Plan (Alternative B) and 2011 Comprehensive Valleywide Land Plan Comparison

Allocation Designation		Draft Great Falls Reservoir Land Management Plan	2011 Comprehensive Valleywide Land Plan
Zone 2	Project Operations	5.2%	100%
Zone 3	Sensitive Resource Management	0%	0%
Zone 4	Natural Resource Conservation	0%	0%
Zone 5	Industrial	0%	0%
Zone 6	Developed Recreation	94.8%	0%
Zone 7	Shoreline Access	0%	0%

TVA does not propose to change the allocation of the two parcels (362.4 acres) on Great Falls Reservoir. See Appendix B for parcel allocation description tables.

3.4 Property Administration

As stewards of public land, TVA uses the RLMP, along with TVA policies and guidelines, to manage resources and to respond to requests for the use of TVA land. Inquiries about or requests for the use of TVA land can be made to the TVA Public Land Information Center at 800-TVA-LAND or 800-882-5263 between 8 a.m. and 6 p.m. Eastern time Monday through Friday.

Pursuant to the TVA Land Policy, TVA would consider changing a land use designation outside of the normal planning process only for the purpose of water access for industrial or commercial recreational operations on privately owned back-lying land or to implement TVA's SMP.

Additionally, there are a small number of TVA parcels in the Valley that have deeded access rights for shoreline access that are currently utilized for other uses such as commercial recreation and industrial. Should the private back-lying land become residential, a request for a change of allocation of the parcel to Zone 7 (Shoreline Access) would be subject, with the appropriate environmental review, to action by the TVA Board or its designee or to Board-approved policy.

Consistent with the TVA Land Policy, those parcels or portions of parcels that have become fragmented from the reservoir may be declared surplus and sold at public auction. Public works/utility projects, such as easements for pipelines, power or communication wires, roads, or

other public infrastructure, proposed on TVA lands that do not affect the proposed allocated land use or sensitive resources would not require an allocation change as long as such projects would be compatible with the use of the allocated zone. Proposed public works/utility projects would be subject to a project-specific environmental review. Any other requests involving a departure from the planned uses would require appropriate approval. Proposals consistent with TVA's policies and the allocated use, and otherwise acceptable to TVA, will be reviewed in accordance with NEPA and must conform to the requirements of other applicable environmental regulations and other legal authorities.

CHAPTER 4. PARCEL DESCRIPTIONS

Note: This chapter describes the proposed land use determined to be most suitable for each parcel of TVA land as shown on the plan maps (Appendix A, Panel 1). The parcel descriptions include the acreage rounded to the nearest tenth and the proposed land use. Relevant data regarding the planned use are provided for each tract and include existing land uses, physical characteristics of the land, presence of existing private water use facilities, and any special considerations related to the future use.

Under Section 26a of the TVA Act, TVA reviews requests for construction of water use facilities on TVA-managed reservoirs in the Tennessee River Watershed. Section 26a provides that any obstructions along, across, or in the Tennessee River system (including water use facilities) must be approved by TVA. TVA's Section 26a authority is limited to structures within TVA flowage easement on Great Falls Reservoir because it is on the Cumberland River system. No existing private water use facilities are currently present.

Parcel 1 - (19.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is the Great Falls Dam Reservation and receives heavy informal public use. Existing facility development includes the dam powerhouse and associated access roads, transmission lines and substations. Tennessee State Route (SR) 287, which travels through rural Warren and Van Buren counties, is located on this parcel. Because this tract contains the Great Falls Dam Reservation, it is also considered historically significant. Great Falls Dam and powerhouse are historically significant structures and eligible for listing on the National Register of Historic Places. Requests for private water use facilities will not be considered.

Table 4−1. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Warren and White, Tennessee
Topographic Map	Campaign and Doyle
Stream Mile and Bank	Caney Fork River Mile 91.1B
Land Use/Land Cover	Mixture of powerhouse, roads, substations, and water control structures
Known Dispersed Recreation Opportunities	Bank fishing, hiking, canoe and kayaking
Current Agreements/Commitments	Term easement to Middle Tennessee Natural Gas Utility District for gas/natural gas utilities
Potential Projects	Placement on the National Register of Historic Places
Potential Partners	State of Tennessee

Parcel 2 - (343.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

Parcel 2 is located at the confluence of the Caney Fork and Collins River. The parcel lies on both banks of the Caney Fork and the left descending bank of the Collins River. This parcel overlooks the Caney Fork Gorge below Great Falls Dam. Great Falls waterfall is a 30-foot horseshoe cascading waterfall located below the 19th century Great Falls Cotton Mill. Historically, Tennessee State Parks have managed this parcel as part of the Rock Island State Park. Amenities include an observation area, picnic facilities, restroom facilities, and trails. Additional information about Rock Island State Park can be found the Tennessee State Parks' Web site, http://tnstateparks.com/parks/about/rock-island. Within Rock Island State Park there are records of two state-listed species, palamocladium (*Palamocladium leskeoides*) and short-head rush (*Juncus brachycephalus*).

As noted in Section 2.2.2, the State of Tennessee has requested that TVA grant a term easement for public and commercial recreation use over this TVA parcel. The State's proposed plans for the property include relocating SR-287 away from the Great Falls Cotton Mill and allowing a third-party to restore the mill for commercial recreation purposes (such as a restaurant, event center, etc.).

The Great Falls Cotton Mill is a three-story textile mill completed in 1892. This structure was listed on the National Register of Historic Places in 1982. The mill has great local and statewide significance and is in remarkably good condition. During a 2016 survey of the area, two historic cemeteries and an archaeological site (40WR125) were identified. Site 40WR125 consists of dispersed prehistoric stone tools and manufacturing debris and the visible remains of 18 different historic structures, possibly associated with the Great Falls Cotton Mill and the early twentieth century Great Falls Dam

The parcel is mostly forested with access via SR-287. One cave occurs on this parcel. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−2. Parcel Information

Location Component	Parcel Specific Information
County, State	Warren and White, Tennessee
Topographic Map	Campaign and Doyle
Stream Mile and Bank	Caney Fork River Mile 91.1
Land Use/Land Cover	Mostly forested with roads, cotton mill and appurtenant structures
Known Dispersed Recreation Opportunities	Bank fishing, hiking, canoe and kayaking
Current Agreements/Commitments	• None identified
Potential Projects	Relocating SR 287, Restoration of Great Falls Cotton Mill
Potential Partners	None identified

This page intentionally left blank

CHAPTER 5. PLANNING TEAM

Chellye L Campbell

Position:	Senior Specialist, Land Policy
Education:	B.S., Biology
Experience:	15 years in Planning and Managing Land
Involvement:	Deed interpretation and Land Policy guidance

Thomas O. Maher

Position:	Archaeologist
Education:	Ph.D., Anthropology
Experience:	32 years in the field of Archaeology
Involvement:	Planning Team and Cultural Resource Management

Leonard L. McCurdy, Jr.

Position:	Senior Specialist, Reservoir Land Use and Permitting
Education:	B.S., Environmental Studies–Chemistry; J.D., Law
Experience:	25 years in the field of Law including 18 years in TVA real property rights
Involvement:	Deed interpretation and Land Policy guidance

Heather L. Montgomery

Position:	Senior Program Manager, Reservoir Lands Planning
Education:	B.S., Environmental Biology
Experience:	15 years in Planning and Managing Land and Environmental Impacts Evaluation
Involvement:	Program Manager

Mark T. Morrissey

Position:	Watershed Representative
Education:	B.S., Geography
Experience:	2 years in Planning and Managing Land; 5 years in Industrial Safety and Compliance
Involvement:	Planning Team and preparation of geographic information system

Karen E. Rylant

Position:	Senior Specialist, Section 26a Policy and Process
Education:	Ph.D., Agronomy (Soil Chemistry); M.S., Soil Fertility; B.A., Chemistry, B.A., Geology
Experience:	8 years in Environmental Research; 4 years in Land and Shoreline Management
Involvement:	Deed interpretation and Section 26a guidance

Lesley M. White

Position:	Recreation Agreements Specialist
Education:	M.S. and B.S., Biological Sciences
Experience:	9 years in Land Management and Permitting
Involvement:	Planning Team

This page intentionally left blank

CHAPTER 6. LITERATURE CITED

Benson, A.J., D. Raikow, J. Larson, A. Fusaro, and A.K. Bogdanoff. 2016. Dreissena polymorpha. USGS Nonindigenous Aquatic Species Database, Gainesville, Florida. Retrieved from https://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=5 (accessed October 2016).

Dillon, J. 2009. Warren County. The Tennessee Encyclopedia of History and Culture Version 2.0. Retrieved from http://tennesseeencyclopedia.net/entry.php?rec=1469 (accessed October 25, 2016).

EDDMapS. 2016. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Retrieved from http://www.eddmaps.org/ (accessed October 2016).

Etnier, D. A. and W. C. Starnes. 1993. The Fishes of Tennessee. Knoxville: University of Tennessee Press.

Homer, C.G., J.A. Dewitz, L. Yang, S. Jin, P. Danielson, G. Xian, J. Coulston, N.D. Herold, J.D. Wickham, and K. Megown. 2015. Completion of the 2011 National Land Cover Database for the conterminous United States-Representing a decade of land cover change information. Photogrammetric Engineering and Remote Sensing, v. 81, no. 5, p. 345-354.

NatureServe. 2016. NatureServe Web Service. Arlington, Virginia. U.S.A. Retrieved from http://services.natureserve.org (accessed July 2016).

TDEC. 2014. Tennessee Department of Environment and Conservation. TDEC Rare Species Data viewer. Retrieved from https://tn.gov/environment/article/tdec-dataviewers (accessed July 2016).

———. 2016. Water Resources Data and Map Viewer web interface. Retrieved from https://www.tn.gov/environment/article/wr-water-resources-data-viewer (accessed July 2016).

Tennessee Exotic Pest Plant Council. 2009. TN-EPPC Invasive Exotic Pest Plants in Tennessee. December 2009 (2nd Edition). Retrieved from http://www.tneppc.org/ (accessed August 2016).

Tennessee State Parks. 2016. Rock Island State Park. Retrieved from

———. 1999. Shoreline Management Initiative (SMI): An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley Final Environmental Impact Statement. Retrieved from https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy (accessed October 2016).

———. 2005. Tennessee Valley Authority Recreation Strategic Plan: A Framework for Providing Recreation Opportunities On and Along the Tennessee River 2004-2005.

———. 2011. Natural Resource Plan: Alabama, Georgia, Kentucky, Mississippi, North Carolina, Tennessee, and Virginia, Final Environmental Impact Statement. Tennessee Valley Authority. 2011. Page 8. Retrieved from https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan (accessed October 2016).

———. 2016. Tennessee Valley Authority Natural Heritage Database, Data Received 2016.

TWRA. 2016. Tennessee Wildlife Resources Agency. Tennessee Watchable Wildlife www.tennesseewatchablewildlife.org (accessed July 2016).

USCB. 2015. U.S. Census Bureau. Annual Estimates of the Resident Population: April 1, 2010-July 1, 2015. Retrieved from http://factfinder.census.gov/ (accessed July 2016).

———. 2010a. USCB Population Division. Annual Estimates of the Resident Population: April 2010-July 1, 2015, UT Center for Business and Economic Research, 2003.

———. 2010b. American Fact Finder 2010-2014 American Community Survey, 5-year estimates Retrieved from http://factfinder.census.gov/ (accessed July 2016).

USEPA. 2013. U.S. Environmental Protection Agency. Level III Ecoregions of the Continental United States: Corvallis, Oregon, U.S. EPA– National Health and Environmental Effects Research Laboratory, map scale 1:7,500,000. Retrieved from https://archive.epa.gov/wed/ecoregions/web/html/level_iii_iv-2.html#Level III (accessed July 2016).

U.S. Fish and Wildlife Service. 2016a. IPaC Trust Resources Report. Information, Planning and Conservation System. Retrieved from https://ecos.fws.gov/ipac/ (accessed October 2016).

USFWS. 2016b. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Retrieved from http://www.fws.gov/wetlands (accessed July 2016).

USGS. 2016. U.S. Geological Survey. Land Cover Trends Project. Retrieved from http://landcovertrends.usgs.gov/main/ecoIndex.html (accessed July 2016).

GLOSSARY

acre	A unit measure of land area equal to 43,560 square feet
agricultural licensing	Some parcels or portions of parcels designated for other purposes or uses may also be suitable for interim agricultural licensing. These parcels have been identified using the criteria contained in TVA's agriculture instruction. Normal tenure for a TVA agricultural license is five years. Land with extreme erosion potential may not be licensed for agricultural use unless erosion and sediment controls, including the use of best management practices, can be successfully implemented. Further investigation and/or mitigation of adverse impacts to natural or cultural resources may be required prior to approval of license agreements.
cultural resources	Archaeological, historic, and architectural resources
dam reservation	Lands generally maintained in a park–like setting by TVA to protect the integrity of the dam structure, hydroelectric facilities, and navigation locks. The reservation also provides for public visitor access to the TVA dam facilities and recreation opportunities, such as public boat access, bank fishing, camping, picnicking, etc. Hunting is not typically allowed on dam reservations.
deciduous	Vegetation that sheds leaves in autumn and produces new leaves in the spring.
dispersed recreation	Recreation of an informal nature such as hunting, hiking, biking, bird watching, photography, primitive camping, bank fishing, and picnicking, and etc. that occur on TVA land. These activities are not associated with developed facilities although some improvements may occur for access, health and safety, or to protect the environment.
embayment	A bay or arm of the reservoir
emergent wetland	Wetlands dominated by erect, rooted herbaceous plants, such as cattails and bulrushes.
endangered species	A species in danger of extinction throughout all or a significant part of its range. Endangered species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.
Environmental Policy	A TVA Board–approved policy that communicates guiding principles to lead TVA successfully in the reduction of its environmental impact while continuing to provide reliable and competitively priced power to the Valley
floodplain	Any land area susceptible to inundation by water from any source by a flood of selected frequency. For purposes of the National Flood Insurance Program, the floodplain, as a minimum, is that area subject to one percent or greater chance of flooding (100–year flood) in any given year.
forest	Vegetation having tree crowns overlapping, generally forming 60 to100 percent cover.
Land Policy	A TVA Board–approved policy that guides retention, disposal, and planning interests in real property
mitigation	An action that either will result in avoidance or an effect or cause the results of an activity to be minor in significance

natural areas	Ecologically significant sites, lands set aside for particular management objectives, and lands that contain sensitive biological, cultural or scenic resources. The TVA natural area program includes small wild areas, habitat protection areas, wildlife observation areas, and ecological study areas.
plan tract	A numbered parcel of TVA fee–owned land that has been assigned, through the reservoir land planning process, an allocation to guide future land use decisions.
prime farmland	Generally regarded as the best land for farming, these areas are flat or gently rolling and are usually susceptible to little or no soil erosion. Prime farmland produces the most food, feed, fiber, forage, and oil seed crops with the least amount of fuel, fertilizer, and labor. It combines favorable soil quality, growing season, and moisture supply and, under careful management, can be farmed continuously and at a high level of productivity without degrading either the environment or the resource base. Prime farmland does not include land already in or committed to urban development, roads, or water storage.
riparian	Related to or located on the banks of a river or stream
scrub–shrub	Woody vegetation less than about 20-feet-tall. Species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions
shoreland	The surface of land lying between the minimum pool elevation of a TVA reservoir and the maximum shoreline contour or TVA back–lying property (whichever is further)
shoreline	The line where the water of a TVA reservoir meets the shore when the water level is at the normal summer pool elevation.
shoreline access rights	TVA land encumbered with deeded or implied rights held by adjacent property owners. The deeded or implied rights allow individuals to construct water use facilities upon receipt of TVA's written approval of plans.
threatened species	A species threatened with extinction throughout all or a significant portion of its range or territory. Threatened species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.
wetlands	As defined in TVA Environmental Review Procedures, "Wetlands are those areas inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances do or would support a prevalence of vegetation or aquatic life that requires saturated or seasonably saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, mud flats, and natural ponds.
wildlife management area	Land and/or water areas designated by state wildlife agencies, such as the Tennessee Wildlife Resources Agency, for the protection and management of wildlife. These areas typically have specific hunting and trapping regulations as well as rules regarding appropriate uses of these areas by the public.

INDEX

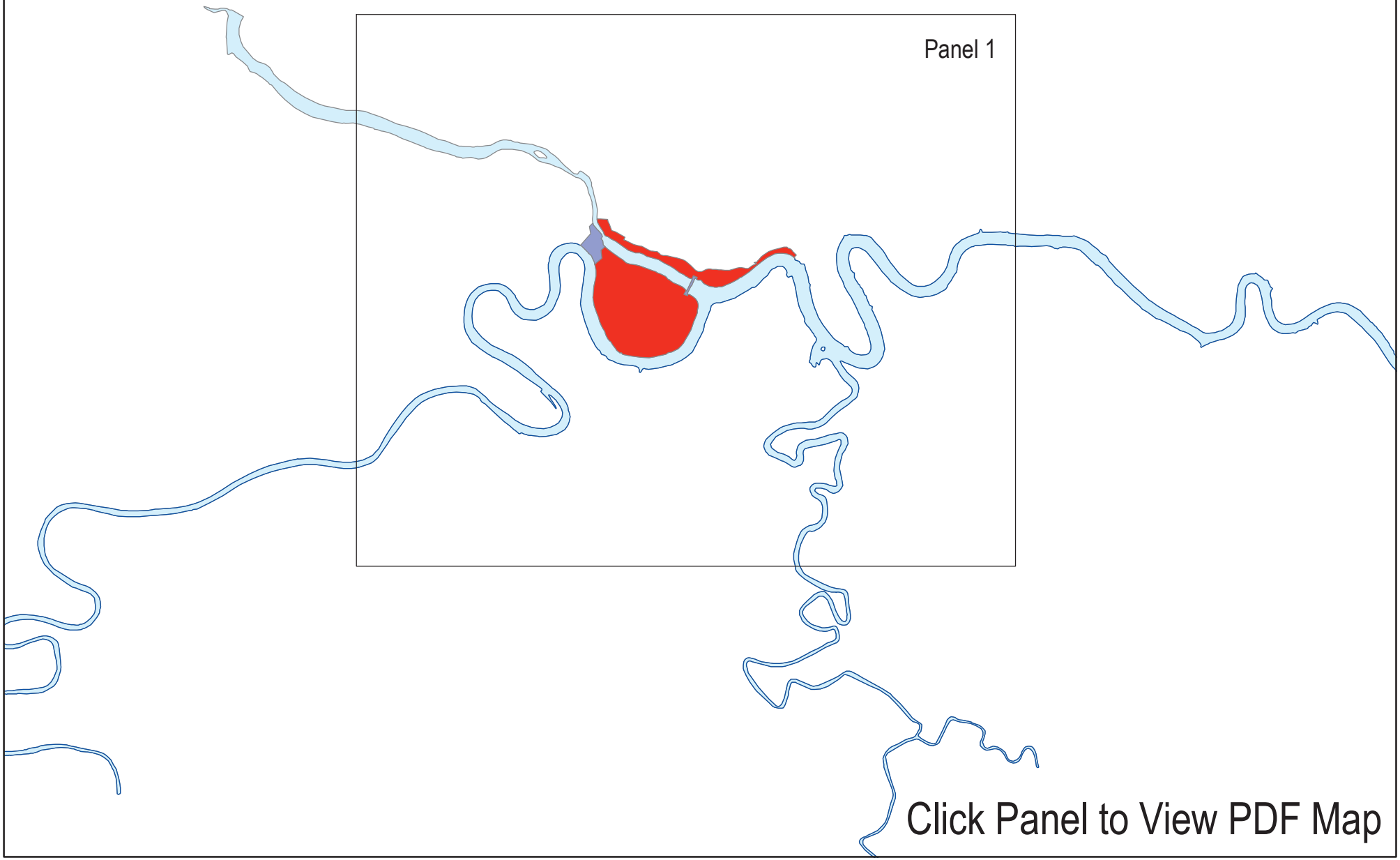
Advisory Council on Historic Preservation 32
aquatic ecology ..... i, 16
archaeological resource 32, 35, 43
area of potential effect, iii 32, 34
back-lying land 50, 51
best management practice 61
Committed land 47
Comprehensive Valleywide Land Plan ..... ii, iii, 5, 6, 41, 49, 50
cultural resource 31, 32, 34, 35, 48, 55, 61
deeded access 50
developed recreation ..... ii, 5, 9, 10, 11, 12, 21, 36, 37, 45, 48, 49, 50, 54, 55
ecologically significant site 36, 62
endangered species ..... i, 17, 48, 61, 62
environmental impact statement ..... iii, 1, 41, 60
Executive Order 15, 39, 59
fish, ... iii,16, 19, 27, 59, 60
flood, ... 1, 8, 9, 28, 29, 30, 32, 41, 61
floodplain, ... 30, 61
flowage easement 8, 9, 41
Great Falls ..1, i, ii, 1, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 21, 22, 23, 26, 27, 28, 29, 30, 31, 32, 33, 36, 37, 38, 39, 40, 41, 47, 48, 49, 50, 53, 54, 60
industrial 5, 10, 33, 41, 44, 45, 47, 48, 50, 51, 57
Kentucky, ... 7
land use, ... i, ii, 3, 5, 9, 28, 32, 37, 41, 42, 46, 47, 48, 50, 51, 53, 57, 62
maximum shoreline contour, ... 62
mitigation, ... 34, 35, 61, 62
mussel, ... 19, 27
National Environmental Policy Act (NEPA), ... iii, 17, 33, 39, 51
National Historic Preservation Act, iii, ... 32, 33, 35
National Park Service, ... 36
National Register of Historic Places, ... iii, 9, 31, 33, 35, 43, 53, 54
natural area, ... 36, 43, 44, 46, 48, 62
plant communities, ... 16
prime farmland, ... i, 10, 62
programmatic agreement, ... 35
recreation, ... i, 4, 9, 11, 12, 30, 37, 40, 42, 43, 44, 45, 46, 48, 49, 50, 53, 57, 60, 61
Reservoir Land Management Plan, ... ii, iii, 1, 4, 5, 6, 9, 11, 29, 30, 41, 48, 49, 50
residential development, ... 9, 37
residential water use facilities, ... 46
scoping, ... 1
Section ..... 106 of the National Historic Preservation Act, 32
Section 26a of the TVA Act, ... 9, 41, 53
sensitive resource, ... 5, 35, 42, 43, 44, 46, 48, 50, 51
shoreline access, ... 5, 41, 46, 48, 50, 62
Shoreline Management Initiative, ... iii, 4, 29, 41, 60
Shoreline Management Policy, ... i, iii, 4, 9, 46, 50
socioeconomics, ... i, 37
species, ... i, ii, 13, 14, 15, 17, 21, 22, 25, 26, 27, 29, 43, 54, 59, 61, 62

State Historic Preservation Officer, ...32, 34, 35
tailwater, ...8
Tennessee, 1, i, iii, 1, 2, 7, 8, 9, 11, 12, 15, 19, 23, 25, 33, 36, 37, 38, 39, 49, 53, 54, 55, 59, 60, 63
Tennessee Valley Authority, ... 1, i, ii, iii, 1, 2, 3, 4, 5, 8, 9, 10, 11, 12, 14, 15, 16, 17, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 53, 54, 55, 57, 59, 60, 61, 62
terrestrial ecology,..... i, 12
threatened, ... i, ii, 17, 21, 27, 43, 48, 54, 62
threatened species, ...17, 62
TVA Land Policy, ...50, 51
U.S. Army Corps of Engineers,..... 7, 36
U.S. Environmental Protection Agency, ...59
U.S. Fish and Wildlife Service, ...30, 43, 60
visual resource,..... i, 5, 36
wetland, ...i, ii, iii, 13, 14, 28, 29, 30, 43, 48, 60, 61, 62
wildlife, ... ii, 12, 14, 22, 28, 30, 42, 43, 44, 47, 60, 62, 63

Appendix A – Draft Land Management Plan Maps – Panel 1

This page intentionally left blank

Great Falls Reservoir



Click Panel to View PDF Map

This page intentionally left blank

Appendix B – Comparison of Parcel Allocations by Alternative

This page intentionally left blank

APPENDIX B

Comparison of Parcel Allocations by Alternative

GREAT FALLS RESERVOIR

TVA does not propose to change the allocation of the two parcels (362.4 acres) on Great Falls Reservoir. See Table below:

Number of Parcels Per Zone Allocation			
Zone 2	1	Zone 5	0
Zone 3	0	Zone 6	1
Zone 4	0	Zone 7	0
Parcel	**No Action Allocation**	**Proposed Allocation**	**Acres per Allocation**
1	2	2	19.0
2	6	6	343.4
Total = 2 Parcels		**Total = 362.4 Acres**	

This page intentionally left blank

TENNESSEE VALLEY AUTHORITY

Multiple Reservoir Land Management Plans

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Volume V
Kentucky Reservoir

December 2016

TVA

This page left blank intentionally

Document Type: EIS Administrative Record
Index Field: Draft EIS
Project Name: Multiple RLMPs & CVLP EIS
Project Number: 2016-2

KENTUCKY RESERVOIR

Draft Reservoir Land Management Plan

VOLUME V

MULTIPLE RESERVOIR LAND MANAGEMENT PLANS
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Prepared by
Tennessee Valley Authority

December 2016

This page intentionally left blank

Table of Contents

ACRONYMS AND ABBREVIATIONS ..... V-V
CHAPTER 1. INTRODUCTION..... V-1
1.1 Tennessee Valley Authority History V-1
1.2 Overview of TVA's Vision and Environmental Policy V-2
1.2.1 TVA's Mission V-2
1.2.2 Environmental Policy V-2
1.2.3 Land Policy V-2
1.2.4 Shoreline Management Policy V-3
1.3 The Natural Resource Plan V-5
1.4 Purpose of Reservoir Land Planning V-5
CHAPTER 2. REGIONAL OVERVIEW..... V-7
2.1 History of the Kentucky Dam V-7
2.2 The Kentucky Reservoir and Present Shoreline V-8
2.2.1 Land Use and Prime Farmland V-9
2.2.2 Recreation V-11
2.2.3 Terrestrial Ecology V-17
2.2.4 Aquatic Ecology V-23
2.2.5 Threatened and Endangered Species V-26
2.2.6 Water Quality V-47
2.2.7 Wetlands V-49
2.2.8 Floodplains V-51
2.2.9 Air Quality V-51
2.2.10 Cultural and Historic Resources V-52
2.2.11 Natural Areas and Ecologically Significant Sites V-55
2.2.12 Aesthetics and Visual Resources V-55
2.2.13 Noise V-56
2.2.14 Socioeconomics and Environmental Justice V-57
2.3 Major Features of Kentucky Reservoir V-62
2.3.1 Natural Resource Management V-62
2.3.2 Tennessee National Wildlife Refuge V-63
2.3.3 Dewatering Units V-63
2.3.4 Embankment Protection Plantings V-66
2.3.5 Land Between the Lakes V-68
2.3.6 Trail of Tears National Historic Trail V-68
2.4 Future Management of Reservoir Lands V-68

CHAPTER 3. LAND PLANNING PROCESS V-71
3.1 Process for Planning Land V-71
3.2 Kentucky Reservoir Land Planning Goal and Objectives V-76
3.3 RLMP Parcel Allocations V-77
3.4 Property Administration V-82
CHAPTER 4. PARCEL DESCRIPTIONS V-85
CHAPTER 5. PLANNING TEAM V-489
CHAPTER 6. LITERATURE CITED V-491
GLOSSARY V-495
INDEX V-497

Appendices

Appendix A – Draft Land Management Plan Maps – Panels 1 through 12 ..... V-503
Appendix B – Comparison of Parcel Allocations by Alternative V-507

List of Tables

Table 2-1. Prime Farmland and Farmland of Statewide Importance on Kentucky Reservoir V-11
Table 2-2. Developed Public Recreation Areas on TVA Lands on the Kentucky Reservoir (Managed By TVA or Another Public Agency) V-13
Table 2-3. Developed Commercial, Private and Semi-Private (camps) Recreation Areas on TVA Lands on the Kentucky Reservoir V-15
Table 2-4. Land Cover on TVA Owned Parcels and within the Vicinity of Kentucky Reservoir V-18
Table 2-5. Invasive Non-native Plant Species that Pose a Severe Threat Known to Occur in Tennessee and Kentucky V-21
Table 2-6. RFAI and Benthic Community Scores for Kentucky Reservoir (2011-2015) V-24
Table 2-7. Fish Species in Kentucky Reservoir V-24
Table 2-8. Federally and State-Listed Species in the Kentucky Reservoir Counties V-27
Table 2-9. Habitat Requirements for Plant Species of Conservation Concern within 5 Miles of Kentucky Reservoir V-34
Table 2-10. Habitat Requirements for Terrestrial Species of Conservation Concern within 3 Miles of Kentucky Reservoir V-37
Table 2-11. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Kentucky Reservoir V-43
Table 2-12. Ecological Health Indicators at Kentucky Reservoir — 2011 ..... V-48
Table 2-13. Direct Reservoir Average Daily Water Supply Withdrawals and Wastewater Discharges — 2016 ..... V-49
Table 2-14. Wetland Types within the Kentucky Reservoir V-50
Table 2-15. Population and Percent Growth – Kentucky Reservoir V-58

Table 2-16. Employment and Income, 2010-2014 – Kentucky Reservoir V-60
Table 2-17. Minority Population and Poverty, 2010-2014– Kentucky Reservoir V-61
Table 2-18. Summary of Embankment Protection Planting Efforts V-67
Table 3-1. Land Use Zone Definitions V-71
Table 3-2. Summary of Proposed Land Use Allocations for Kentucky Reservoir Land Management Plan (Alternative B) V-77
Table 3-3. Kentucky Reservoir Land Management Plan and 2011 Comprehensive Valleywide Land Plan Comparison V-80

List of Figures

Figure 1-1. TVA Managed Reservoir Land V-4
Figure 3-1. Percent of Kentucky Reservoir Acreage Allocated by Zone V-78

This page intentionally left blank

ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effect
ATV	All-Terrain Vehicle
CFR	Code of Federal Regulations
CVLP	Comprehensive Valleywide Land Plan
dBA	A-Weighted Decibel
EIS	Environmental Impact Statement
EO	Executive Order
gpm	Gallons per Minute
HPA	Habitat Protection Area
KDFWR	Kentucky Department of Fish and Wildlife Resources
KSR	Kentucky State Route
LBL	Land Between the Lakes
msl	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRP	Natural Resource Plan
RFAI	Reservoir Fish Assemblage Index
RLMP	Reservoir Land Management Plan
ROTC	Reserve Officers Training Corps
ROW	Right-of-Way
RVSMP	Reservoir Vital Signs Monitoring Program
SMI	Shoreline Management Initiative
SMP	Shoreline Management Policy
SWA	Small Wild Area
TNWR	Tennessee National Wildlife Refuge
TRM	Tennessee River mile
TSR	Tennessee State Route
TVA	Tennessee Valley Authority
TVA Board	Tennessee Valley Authority Board of Directors
TWRA	Tennessee Wildlife Resources Agency
U.S.	United States
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service

USGS	U.S. Geologic Survey
Valley	Tennessee River Valley Region
WMA	Wildlife Management Area

CHAPTER 1. INTRODUCTION

The draft Kentucky Reservoir Land Management Plan (RLMP) is a study of the Tennessee Valley Authority (TVA)-managed public land surrounding Kentucky Reservoir. It is one of eight draft RLMPs considered under Alternative B of this Environmental Impact Statement (EIS). The EIS Volume I, contains information on the scoping process, allocation process, alternatives, comparison of the alternatives, and analysis of impacts. In addition, the EIS contains a summary, an index and appendices.

Volume V of the EIS addresses TVA's draft RLMP for Kentucky Reservoir. This Volume provides background information about TVA land management throughout its history and specifically TVA management of public land surrounding Kentucky Reservoir. It explains the purpose of the draft RLMP and describes the process used in its development. The draft RLMP includes the planning process, which lists the objectives around which the draft RLMP was developed and a summary of the allocation process. The Kentucky Reservoir Regional Overview (Chapter 2) describes the natural and social development of the reservoir and the surrounding area. The Parcel Descriptions (Chapter 4) include total acreage and parcel descriptions documenting proposed land management allocations. The allocation map is included as Appendix A of this draft RLMP.

Once TVA completes its Multiple RLMP EIS, this Volume will serve as the consolidated planning document addressing management of TVA reservoir lands on Kentucky Reservoir and will be available to TVA staff and the public.

1.1 Tennessee Valley Authority History

President Franklin Roosevelt needed creative solutions to lift the nation out of the depths of the Great Depression, and TVA is considered one of his most innovative initiatives. Roosevelt envisioned TVA as an agency different from any other. He asked Congress to create "a corporation clothed with the power of government but possessed of the flexibility and initiative of a private enterprise." On May 18, 1933, Congress passed the Tennessee Valley Authority Act (TVA Act). A link to the TVA Act is available at http://www.tva.com/abouttva/history.htm.

From the start, TVA established a unique problem–solving approach to fulfilling its mission: Integrated Resource Management. Each issue TVA faced—whether it was power production, navigation, flood control, malaria prevention, reforestation, or erosion control—was studied in its

broadest context. TVA weighed each issue relative to the others. From this beginning, TVA has held fast to its strategy of integrated solutions, even as the issues changed over the years. A short TVA history is available at http://www.tva.com/abouttva/history.htm.

1.2 Overview of TVA's Mission and Environmental Policy

1.2.1 TVA's Mission

TVA has a rich history of improving quality of life and economic prosperity for people and businesses in the TVA service area. TVA was created by Congress in 1933 and charged with a unique mission—to improve the quality of life in the Valley through the integrated management of the region's resources. For more than eight decades, we have worked tirelessly to carry out that mission, and we are working just as hard to make life better for the nine million people who live in the Valley today. We serve the people of the Tennessee Valley by focusing on three key areas: energy, environment, and economic development.

1.2.2 Environmental Policy

As stated in TVA's 2007 Strategic Plan, "TVA will be proactive in addressing environmental concerns, including those related to global climate change." About half of the identified strategic objectives and critical success factors in the plan relate directly to TVA's environmental activities and policy-making.

Following the release of the 2007 Strategic Plan, the TVA Board asked for the development of an integrated environmental policy to outline objectives and critical success factors across the multiple areas of TVA's activities. In 2008, the TVA Board approved the Environmental Policy, which provides guiding principles for reducing the environmental impacts of TVA operations while continuing to provide reliable and affordable power to the Valley. In 2010, a biennial review of the Environmental Policy was completed, which did not result in major changes or revisions. TVA's overarching Environmental Policy objective is to provide cleaner, reliable, and affordable energy; support sustainable economic growth in the Valley; and engage in proactive environmental stewardship in a balanced and ecologically sound manner. A copy of the Environmental Policy is available at http://www.tva.com/environment/policy.htm.

1.2.3 Land Policy

On behalf of the United States (U.S.), TVA originally acquired approximately 1.3 million acres of land in the Valley. Creation of the TVA reservoir system inundated approximately 470,000 acres with water. TVA has transferred or sold approximately 508,000 acres, the majority of which was transferred to other federal and state agencies for public uses. TVA currently controls

approximately 293,000 acres of reservoir lands, which continue to be managed pursuant to the TVA Act (Figure 1-1). As part of its management of these lands, TVA allocates them to various land use zones (see Section 3.1). These TVA-managed lands are frequently referred to as "TVA lands" in this document.

In 2006, TVA adopted a Land Policy to guide retention, disposal, and planning of real property. Accordingly, it is TVA's policy to manage its lands to protect the integrated operation of the TVA reservoir and power systems, to provide for appropriate public use and enjoyment of the reservoir system, and to provide for continuing economic growth in the Valley. Recognizing that historical land transfers have contributed substantially to meeting multipurpose objectives, TVA maintains the policy of retaining in public ownership the reservoir lands under its control except in those rare instances where the benefits to the public will be so significant that transferring lands to private ownership or another public entity is justified. The Land Policy is available at https://www.tva.gov/Environment/Environmental-Stewardship/Land-Management/TVA-Land-Policy.

1.2.4 Shoreline Management Policy

In November 1998, TVA completed a Shoreline Management Initiative (SMI) EIS (TVA 1998) analyzing possible alternatives for managing residential shoreline development throughout the Valley. In April 1999, TVA adopted the agency's current Shoreline Management Policy (SMP), which incorporates a strategy of managing public shoreline through an integrated approach that conserves, protects, and enhances shoreline resources and public use opportunities while providing for reasonable and compatible use of the shoreline by adjacent residents. The SMP defines the standards for vegetation management, docks, shoreline stabilization, and other residential shoreline alterations. The SMI EIS is available at https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy.

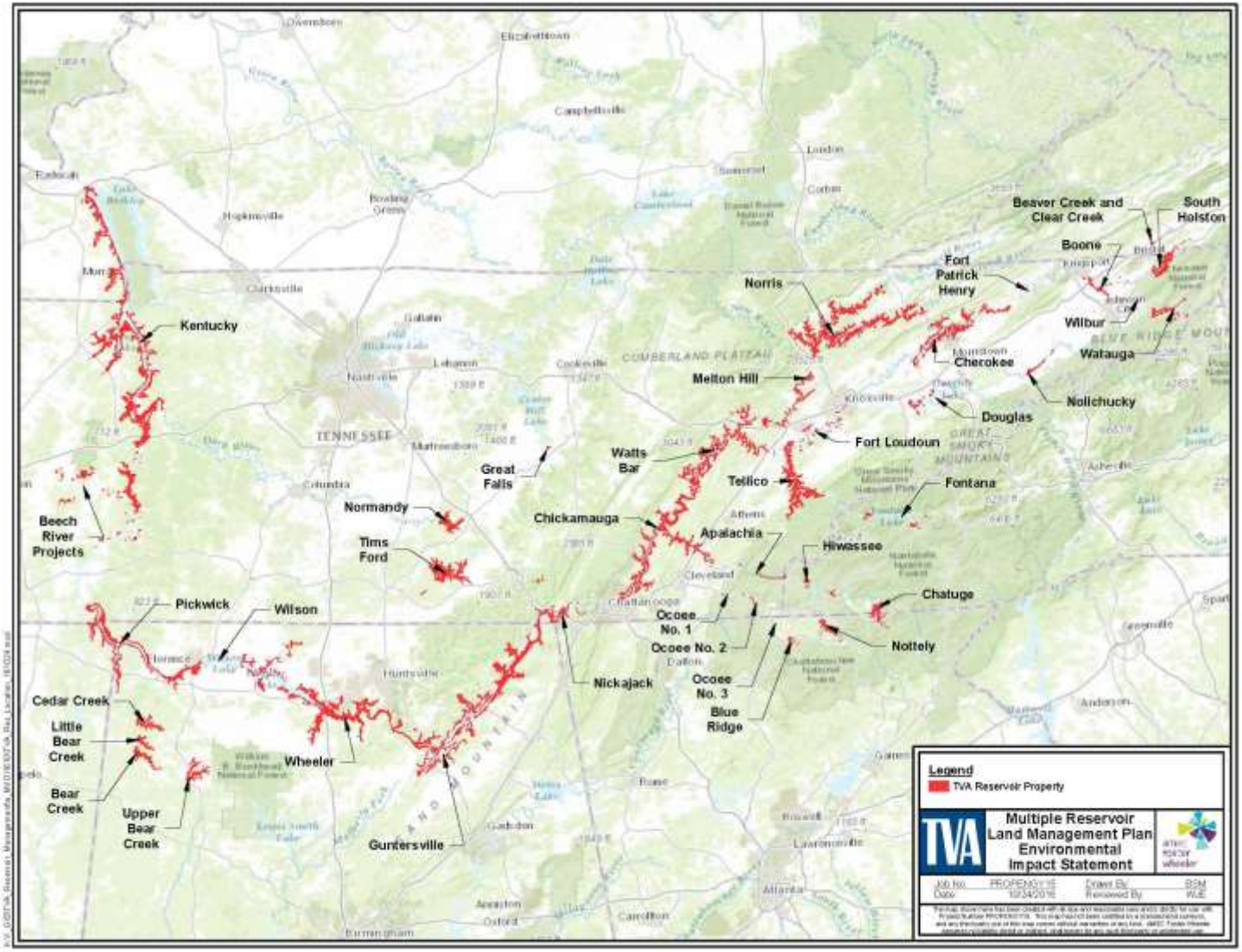


Figure 1-1. TVA Managed Reservoir Land

1.3 The Natural Resource Plan

In 2011, TVA completed a Natural Resource Plan (NRP) (TVA 2011) that strategically guides the management of both renewable and nonrenewable resources, underscoring the importance of protecting those resources that will be lost forever if they are not actively protected or improved today. TVA is one piece of the solution and recognizes the need for a coordinated and collaborative effort to meet the near- and long-term resource needs. As such, the NRP is designed to:

- Integrate the objectives of six resource areas (biological, cultural, recreation, water, public engagement and reservoir lands planning).
- Provide optimum public use benefit.
- Balance competing and sometimes conflicting resource uses.

These competing interests, coupled with today's environmental awareness and focus on preserving nonrenewable resources, underscore the necessity for a consistent approach to the management of TVA lands. The NRP represents TVA's high-level strategy for managing its natural resources in the near and long term. Detailed implementation plans, such as this RLMP, are being developed based on the NRP to drive specific implementation efforts. Although the NRP is a 20-year strategic plan, small adjustments can be made to specific NRP implementation efforts on a five-year cycle. The first five-year cycle will be completed in 2016 with potential revisions to the NRP occurring in 2017. The NRP is available at https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan.

1.4 Purpose of Reservoir Land Planning

As a regional development agency and the nation's largest public power provider, TVA is committed to protecting and sustaining the environmental resources of the Valley for future generations through leadership in clean energy innovation and environmental management. In managing its public lands and resources, TVA seeks to provide efficient resource stewardship that is responsive to stakeholder interests.

TVA intends to manage its public land for an optimum level of multiple uses and benefits that protect and enhance natural, cultural, recreational, and visual resources in a cost-effective

manner. Through this approach, TVA ensures that resource stewardship issues and stakeholder interests are considered while optimizing benefits and minimizing conflicts.

As part of the NRP, TVA developed a Comprehensive Valleywide Land Plan (CVLP). The CVLP guides resource management and administration decisions on the approximately 293,000 acres of TVA lands around 46 reservoirs. It identifies the most suitable uses for the land under TVA's control, identifying areas for project operations, sensitive resource management, natural resource conservation, industrial/commercial development, developed recreation, and shoreline access. The objectives of the CVLP are designed to implement TVA's mission of serving the Valley through energy, environment, and economic development. Under the CVLP, TVA will develop and update RLMPs, such as this plan, for a portion of a reservoir, an entire reservoir, or a group of reservoirs. RLMPs are consistent with TVA's policies and programs discussed within this chapter.

The CVLP will be recalibrated as needed. As described under Alternative B in Volume I of this EIS, TVA proposes to update the target ranges of the CVLP to incorporate the findings of this RLMP and seven other draft RLMPs. The CVLP was based, in part, on the anticipation that some parcels of land may be better allocated to different land use zones from those initially identified. For example, field assessments may identify additional areas that warrant the sensitive resource management allocation. In addition, during the creation or update of each individual RLMP, TVA may determine, either for its own management purposes or as a result of public input, that certain parcels of land should be used differently from how they have been used in the past. The preliminary results of the Kentucky Reservoir planning effort have been included in determining potential revisions to the CVLP. The draft Kentucky RLMP and proposed revisions to the CVLP will be included in the five-year cyclic review of the NRP.

CHAPTER 2. REGIONAL OVERVIEW

The headwaters of the Tennessee River are in eastern Tennessee, in southwestern Virginia, western North Carolina, and in northern Georgia. The Tennessee River is formed by the confluence of the Holston and French Broad rivers just above Knoxville, Tennessee. The river flows in a southwesterly direction through Tennessee, crosses northern Alabama, forms a small portion of the northeastern boundary of Mississippi, and then flows north through western Tennessee and western Kentucky to empty into the Ohio River at Paducah, Kentucky, a distance of about 650 miles. The Tennessee River drains an area of 40,910 square miles, about equal to the area of Ohio. The headwaters are in the Great Smoky Mountains and the Blue Ridge Mountains, which are the highest ranges east of the Rockies. The mountain region is in striking contrast to the relatively flat lands of northern Alabama and to the rolling land of western Kentucky.

The 100-year floodplain of the Tennessee River in Kentucky Reservoir is broad, ranging from one to three miles wide in some places, because the terrain in West Tennessee and Southwest Kentucky is relatively flat. At Kentucky Dam, the crest of the divide between the Tennessee River and Cumberland River watersheds, at about 500 feet mean sea level (msl), is only about 150 feet higher than the summer pool elevation of 359 feet on Kentucky Reservoir.

2.1 History of the Kentucky Dam

Preliminary construction on Kentucky Dam started on July 1, 1938 with funding approved on May 23, 1938 and made available by the Independent Offices Appropriations Act for 1939. These actions marked the start of the seventh main-river dam to be completed by TVA in its program for the unified development of the Tennessee River system. Construction of Kentucky Dam was accomplished in 6 years, from July 1938 to reservoir impoundment in September 1944.

As work was getting under way at Kentucky Dam, World War II upset existing plans and schedules. By the summer of 1940, critical conditions in Europe directed attention to the war potential of the United States and the threat of a serious power outage. Agencies charged with planning the defense of the Nation asked TVA to outline programs whereby an adequate power supply could be provided, and out of these recommendations came three supplementary power

programs, the first approved July 31, 1940, authorizing the construction of Cherokee Dam and Watts Bar Steam Plant and additional generating capacity at other projects.

This action also involved a reappraisal of the Kentucky project, and on August 23, 1940, the TVA Board authorized the installation of four generating units at Kentucky Dam to help meet the predicted load growth in 1945. Within less than a year, on June 5, 1941, the TVA Board determined to install five units at Kentucky Dam, the ultimate capacity. At the same time, the date for the completion of the dam was advanced from the summer of 1945 to the summer of 1944.

Work on Kentucky Dam was hampered by many war–born conditions. The preference rating for the project–under which it obtained materials and equipment–was never high; and on October 20, 1942, the War Production Board ordered the suspension of all work on two of the five proposed generating units and permitted the installation of embedded parts only for a third. On August 28, 1943, resumption of work on the third unit was authorized, and the forth unit was later reinstated.

Labor shortages affected the project; and to add to the difficulties occasioned by the war, adverse weather conditions caused construction delays. In spite of these unfavorable factors, the dam was closed August 30, 1944, and the first generating unit was put in service September 14, 1944. By the end of 1945, four of Kentucky Dam's five units were in operation. The fifth unit, reinstated in June 1945, was completed and placed in operation January 16, 1948.

2.2 The Kentucky Reservoir and Present Shoreline

Kentucky Dam, the lowermost and the largest of the multiple purpose projects of the Tennessee River system, is the key to effective control of discharges from the Tennessee, the largest tributary of the Ohio River. Located at river mile 22.4, Kentucky Dam is only 67.4 river miles above Cairo, Illinois, and its large reservoir with more than 4,000,000 acre-feet of flood storage capacity occupies a strategic position for the reduction of flood crests on the lower Ohio and Mississippi Rivers. The navigation lock at the dam forms the lower gateway to the 184-mile-long Kentucky Reservoir; one of a chain of nine reservoirs, extending a year-round 9-feet deep navigation channel more than 600 miles to Knoxville, Tennessee. Kentucky Reservoir connects the Tennessee River system of reservoirs to the major inland waterways of the great central Mississippi Valley with outlets for navigation to the Great Lakes and the Gulf of Mexico.

The drainage area above the Kentucky Dam consists of 40,200 square miles and comprises about 98 percent of the total drainage area of the Tennessee Valley watershed. The reservoir property is situated in Livingston, Lyon, Calloway, and Trigg counties in Kentucky, and in Humphreys, Benton, Decatur, Hardin, Wayne, Henry, Henderson, Perry, Stewart, Houston, and Carroll counties in Tennessee.

The Kentucky Reservoir has a volume of more than 4,000,000 acre-feet and a total surface area of approximately 260,000 acres when filled to top of gates, elevation 375-feet msl. To create this reservoir, it was necessary to acquire land and land rights for some 310,300 acres, clear over 48,500 acres, displace 2,609 families, protect the town of Big Sandy from backwater, relocate 365 miles of highways and railroads, build 65 new bridges, reconstruct seven bridges, raise three bridges, adjust or construct 104 miles of utility lines, remove and reinter 3,390 graves, and construct eight dewatering units.

Land purchased in fee purchases included the area around the dam necessary for construction purposes and numerous scattered areas, which had been designated for acquisition for departmental programs, for such uses as malaria–control boat bases, recreation parks, and highway and railroad construction. Along the greater portion of the reservoir shoreline, TVA acquired flowage easements to varying contours.

2.2.1 Land Use and Prime Farmland

TVA originally acquired approximately 220,600 acres of land in fee and approximately 89,500 acres of easements for Kentucky Reservoir. Approximately 128,815 acres are inundated at elevation 346-feet. TVA sold or transferred approximately 25,340 acres of land from the original acquisition. In 1963, TVA acquired an additional approximate 170,000 acres for the creation of Land Between the Lakes (LBL) and subsequently, transferred the land to the U.S. Forest Service in 1999. See Subsection 2.3.4 for additional information pertaining to LBL. The remaining approximate 66,445 acres along with approximately 8,268 acres of flood prone areas supporting dewatering units (totaling approximately 74,713 acres) are the scope of this RLMP. These lands are currently in accordance with allocations made by TVA in the Kentucky RLMP completed in 1985.

The shoreline of Kentucky Reservoir is composed of a variety of land uses including the Land Between the Lakes and other recreational areas, forested areas, residential development, suburban areas, parks, farmed areas, and a relatively small amount of industrial and commercial and industrial uses primarily located in the vicinity of the dam. These uses are

generally reflected in the land cover database for the parcels around the reservoir which identifies land cover on these parcels as primarily forested land. Other land cover types within the vicinity of the reservoir include agricultural land and developed open space which includes single family housing units on large lots, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes.

According to TVA's 1998 SMI EIS, TVA owns approximately 1,354 miles of the 2,064 miles of shoreline (66 percent) on Kentucky Reservoir (see Volume I, Table 3-1). Approximately 34 percent of the shoreline is privately owned and is available for residential shoreline access development (see Volume I, Table 3-2). In the SMI EIS, TVA estimated that of that 34 percent, approximately 18 percent of this privately owned shoreline is currently developed with residential subdivisions. TVA has holds flowage easement rights along portions of this private shoreline.

As identified in above, TVA originally purchased approximately 220,600 acres of land in fee and approximately 89,500 acres of easements for Kentucky Reservoir. Some of this land had been sold or transferred. However, any structures placed within existing flowage easements or within the 500-year floodplain are subject to Section 26a of the TVA Act. Section 26a of the TVA Act requires that TVA's approval be obtained prior to the construction, operation, or maintenance of any dam, appurtenant works, or other obstruction affecting navigation, flood control, or public lands or reservations across, along or in the Tennessee River or any of its tributaries.

TVA public land on the Kentucky Reservoir contains 12,824.5 acres of identified prime farmland and 643 acres of farmland of statewide importance (Table 2-1). Prime farmland has soil with the best combination of physical and chemical characteristics for producing food and fiber and is protected from conversion to industrial and nonagricultural uses by the United States Department of Agriculture (USDA).

Table 2-1. Prime Farmland and Farmland of Statewide Importance on Kentucky Reservoir

Zone	Prime Farmland (acres)	Farmland of Statewide Importance (acres)
Zone 2 – Project Operations	215.1	7.0
Zone 3 – Sensitive Resource Management	1,280.8	15.7
Zone 4 – Natural Resource Conservation	8,776.8	490.8
Zone 5 – Industrial	194.4	18.7
Zone 6 – Developed Recreation	985.7	65.0
Zone 7 – Shoreline Access	1,371.7	45.8
Total	**12,824.5**	**643.0**

Source: USDA NRCS 2016a

The majority (8,776.8 and 490.8 acres, respectively) of both prime farmland and farmland of statewide importance acreage occurs in areas to be allocated as Zone 4, wherein approved land uses would typically cause little or no soil disturbance. Major soil disturbance could occur when TVA or other public facilities are constructed in lands that would be designated for Zone 2, which only includes 215.1 acres of prime farmland and 7 acres of farmland of statewide importance. However, most parcels that would be designated for Zone 2 already contain facilities that are not likely to require substantial modification. Only 985.7 acres of prime farmland and 65 acres of farmland of statewide importance occur in areas to be allocated to Zone 6, where major soil disturbances could occur in specific locations, if recreation facilities are constructed. Conversely, large areas could remain unaffected for more dispersed recreation management. The least amount of prime farmland (194.4 acres) occurs in areas proposed to be allocated to Zone 5 and the least amount of farmland of statewide importance (7.0 acres) occurs in areas that would be allocated to Zone 2.

For more information on land use and prime farmland resources and the potential impacts of the draft RLMP, see Volume I, Sections 3.2 and 3.3.

2.2.2 Recreation

TVA provides public lands for developed and dispersed recreational purposes through the reservoir lands planning process. Developed recreation include campgrounds, lodges, marinas, boat ramps, parks, swimming pools, beaches and golf courses. Dispersed recreation activities include picnicking, primitive camping, hiking, bank fishing, hunting, kayaking and canoeing. In 2005, TVA developed a recreation strategic plan aimed at collaboratively

enhancing recreational opportunities and addressing unmet recreational needs while managing the resources of the Tennessee River system (TVA 2005). This strategy laid out guiding principles for how to best design and develop recreation opportunities. During this reservoir lands planning effort, tracts of TVA-managed lands around Kentucky Reservoir were categorized based upon a suitable use that is consistent with TVA policy and guidelines and applicable laws and regulations.

At the Kentucky Reservoir, developed recreation provides modern facilities and amenities such as campgrounds, developed boat launches/ramps, parks and a myriad of day use facilities (picnic areas, swimming beaches, and fishing piers). These uses primarily occur on TVA lands allocated to Zone 6 (Developed Recreation) and Zone 2 (Project Operations). Under the draft RLMP, approximately 7 percent (5,006.7 acres) of TVA land on Kentucky Reservoir would be allocated to Zone 6 and approximately 1 percent (1,254.3 acres) allocated to Zone 2.

Kentucky Reservoir is an outdoor recreation resource that attracts visitors from within and outside the region. Approximately 110 parcels on the reservoir contain developed recreation sites including public parks and access areas, commercial recreation operations and group camps and semi-private clubs. Many of these recreation areas are located on properties that TVA transferred, leased or licensed for recreation development and use. Several public parks developed on lands made available by TVA include the Grand Rivers Park, Big Sandy City Park, Bear Creek Day Use Park, Buckhorn Bay Day Use Area, City of Johnsonville Park, Mousetail Landing State Park, Johnsonville State Park, Kenlake State Resort Park, Kentucky Dam Village State Park, Nathan Bedford Forrest State Park, Paris Landing State Park, Wayne Jerrolds River Park and Wesley Village Park. Commercial marinas include Eagle Bay Marina, Fat Daddy’s Resort and Marina, Harbor Marina, Pebble Isle Marina and Southernaire Marina. Group camps have been developed by the West Tennessee Area Council of the Boy Scouts of America, Four Rivers Boy Scout Council and the Reelfoot Girl Scout Council.

Table 2-2 itemizes developed recreation area lands that are managed by TVA or another public agency for recreation purposes. Table 2-3 summarizes commercial, private, and semi-private developed recreation areas. Tables 2-2 and 2-3 do not itemize recreation areas on non-TVA shorelands (Zone 1) because these areas are beyond the scope of this draft RLMP. Kentucky Reservoir parcel descriptions (see Chapter 4) further describe the management entity and management descriptions of recreation facilities on lands managed by either TVA or by others under agreement.

Table 2-2. Developed Public Recreation Areas on TVA Lands on the Kentucky Reservoir (Managed By TVA or Another Public Agency)

Recreation Area	Managing Entity	Parcel Location
Kentucky Dam Reservation	TVA	2
Grand Rivers Park	City of Grand Rivers, KY	5
Boat Ramp	Tennessee Wildlife Resources Agency (TWRA)	23
Boat Ramp, Campground, Fishing Pier	Houston County, TN	39
Boat Ramp	TWRA	53
Boat Ramp	TWRA	82
Johnsonville State Park	State of Tennessee	90
Boat Ramp	State of Tennessee	93
Park	City of Johnsonville, TN	95
Boat Ramp	TWRA	101a
Boat Ramp	TWRA	103
Boat Ramp	TWRA	117
Mousetail Landing State Park	State of Tennessee	121
Boat Ramp	State of Tennessee	126
Boat Ramp	State of Tennessee	143
Athletic Field	City of Clifton, TN	156
Park	City of Clifton, TN	158
Park	City of Clifton, TN	159
Wayne Jerrolds River Park	City of Savannah	167
Boat Ramp	State of Tennessee	180
Boat Ramp	State of Tennessee	193
Park	Decatur County, TN	208
Athletic Fields	City of Parsons, TN	222
Boat Ramp	State of Tennessee	225
Boat Ramp	TWRA	235
Boat Ramp	TWRA	249
Boat Ramp/Fishing Pier	TWRA	268
Boat Ramp	TWRA	279
Boat Ramp	TWRA	285
Boat Ramp	TWRA	290
Nathan Bedford Forrest State Park	State of Tennessee	290
Nathan Bedford Forrest State Park	State of Tennessee	296
Boat Ramp	TWRA	302

Recreation Area	Managing Entity	Parcel Location
Boat Ramp	TWRA	305
Boat Ramp	TWRA	319
Boat Ramp	TWRA	326
Boat Ramp	TWRA	331
Boat Ramp	TWRA	338
Big Sandy City Park	Town of Big Sandy, TN	347
Boat Ramp	TVA	352
Boat Ramp	TWRA	373
Boat Ramp	TWRA	396
Paris Landing State Park	State of Tennessee	400
Boat Ramp	TWRA	403
Boat Ramp	TWRA	410
Boat Ramp	Kentucky Department of Fish and Wildlife Resources (KDFWR)	429
Boat Ramp	KDFWR	437
Boat Ramp	KDFWR	481
Kenlake State Resort Park	Commonwealth of Kentucky	482
Boat Ramp	Commonwealth of Kentucky	491
Boat Ramp	KDFWR	504
Wesley Village Park	Marshall County, KY	518
Boat Ramp	KDFWR	521
Boat Ramp	Marshall County, KY	537
Camp John Currie	Commonwealth of Kentucky	540
Bear Creek Day Use Park	Marshall County, KY	549
Buckhorn Bay Day Use Area	Marshall County, KY	556
Little Bear Creek Ramp	Marshall County, KY	563
Boat Ramp	KDFWR	566
Kentucky Dam Village State Park	Commonwealth of Kentucky	568
Kentucky Dam Village State Park	Commonwealth of Kentucky	569

Table 2-3. Developed Commercial, Private and Semi-Private (camps) Recreation Areas on TVA Lands on the Kentucky Reservoir

Recreation Area	Managing Entity	Parcel Location
Patti's Restaurant	Commercial	5
Fat Daddy's Resort and Marina	Commercial	13
PJ's Resort	Commercial	15
Leatherwood Resort	Commercial	18
Southernaire Marina	Commercial	43
Cane Creek Dock	Commercial	47
Eagle Bay Marina	Commercial	72
Mason's Dock	Commercial	74
Pebble Isle Marina	Commercial	90
Anchor Harbor Marina	Commercial	93
Cuba Landing Marina	Commercial	101a
Cypress Creek Marina	Commercial	134
Cedar Creek Marina	Commercial	142
Perryville Marina	Commercial	230
Birdsong Resort, Marina and Campground	Commercial	249
Wildlife Cove Marina	Commercial	249
Camp	West Tennessee Area Council of the Boy Scouts of America	259
Camden Bay Resort	Commercial	262
Harmon Creek Resort	Commercial	302
Bass Bay Village and Marina	Commercial	317
Country Junction Resort	Commercial	362
Britton Ford Campground	Commercial	367
Pleasant View Resort	Commercial	373
Camp	Reelfoot Girl Scout Council	384
Boat Slips	Buchanan Condominiums	386
Marina and Boat Ramp	Buchanan Resort	386
Marina and Boat Ramp	Pine Point Resort	386
Big Eagle Recreation Area	Commercial	386
Eagle Nest Marina	Commercial	395
Little Eagle Creek RV Park	Commercial	397
The Breakers of Swan Bay	Commercial	405
Cypress Creek Resort	Commercial	413
Cypress Springs Resort	Commercial	420
Lakeview RV Resort	Commercial	422
Missing Hill Resort	Commercial	424
Waters Edge Marina	Commercial	453

Recreation Area	Managing Entity	Parcel Location
Campground	Commercial	455
Sugar Creek Bay Marina	Commercial	460
Irvin Cobb Resort	Commercial	460
Kentucky Beach Resort	Commercial	464
American Paradise Resort	Commercial	468
Town and Country Resort	Commercial	487
Sportsman Anchor Resort and Marina	Commercial	491
Jonathan Creek Camp and Conference Center	Commercial	494
Pirate's Cove	Commercial	498
Cedar Knob Resort	Commercial	512
Lakeside Landing Campground and Marina	Commercial	521
Camp Manchester Boy Scout Camp	Four Rivers Boy Scout Council	523
Hickory Hill 5 Star Resort	Commercial	527
Shawnee Bay Resort	Commercial	528
Hester's Resort and Marina	Commercial	531
Southern Komfort Resort	Commercial	533
Bee Spring Lodge	Commercial	534
Barge Island Recreational Area	Commercial	537
King Creek Resort	Commercial	545
Big Bear Resort	Commercial	550
Malcom Creek Resort	Commercial	551
Moor's Resort	Commercial	558

Some of the TVA lands around Kentucky Reservoir provide excellent opportunities for dispersed or nature-based recreation activities. Dispersed recreation could occur on lands that would be allocated to Zone 2 and undeveloped areas that would be allocated Zone 6 as well as on land allocated to Zone 3 (Sensitive Resource Management) (approximately 7 percent or 5,283.3 acres) and Zone 4 (Natural Resource Conservation) (74 percent or 55,330.1 acres). For example, on lands that would be allocated to Zone 4 (Natural Resource Conservation), dispersed recreation activities include hunting, wildlife observation, fishing and camping on undeveloped sites.

For more information on recreation resources and the potential impacts of the draft RLMP, see Volume I, Section 3.4.

2.2.3 Terrestrial Ecology

Kentucky Reservoir lies primarily within the Interior Plateau and Southeastern Plains ecoregions. A small portion of the northwestern reaches of the reservoir extend into the Mississippi Valley Loess Plains ecoregion (U.S. Environmental Protection Agency [USEPA] 2013).

The Interior Plateau ecoregion is a series of grassland plateaus and forested uplands that are generally lower in elevation than the Appalachian Mountains to the east but higher than the plains to the south. This region contains relatively flat and fertile lowlands, including the Bluegrass area of central Kentucky and the Nashville Basin in central Tennessee. The Pennyroyal Plateau in south-central Kentucky and northern Tennessee is a dense agricultural area that also contains a distinctive “flatwood” ecosystem. The area is characterized by oak forests and wet conditions that are caused by an underlying hard, dense fragipan soil. Rapid subsurface drainage occurs in sinkhole areas such as south-central Kentucky where extensive cave systems wind through the karst limestone landscape (USGS 2016).

The Southeastern Plains ecoregion is the largest ecoregion in the eastern U.S. The irregular, relatively flat plains of the ecoregion are covered by a mosaic of cropland, pasture, forest, and wetland. The ecoregion is characterized by long growing seasons and abundant rainfall, but the relatively poor sandy soils found in much of the ecoregion limit agricultural competitiveness with many other regions. Natural forests of pine, hickory, and oak once covered most of the ecoregion, but much of the natural forest cover has been replaced by heavily managed timberlands (USGS 2016).

The Mississippi Valley Loess Plains extends from western Kentucky south to Louisiana. The topography consists primarily of irregular plains. This region contains a highly erodible, thick layer of loess, a unique geologic deposit consisting almost entirely of wind-transported, silt-sized grains of quartz and other common minerals (USGS 2016).

The variety of landforms, soils, climate, and geology across the ecoregions encompassing Kentucky Reservoir have allowed for an extremely diverse assemblage of animals, including migratory birds of conservation concern. Deciduous forests and mixed evergreen-deciduous forests provide wildlife habitat among the agriculture and more urbanized areas. Table 2-4 contains a summary of the land cover within and in the vicinity of Kentucky Reservoir.

Table 2-4. Land Cover on TVA Owned Parcels and within the Vicinity of Kentucky Reservoir

Land Cover Type	TVA Property		Vicinity (5-mile radius)	
	Acres[1]	Percent Cover (%)	Acres[1]	Percent Cover (%)
Barren Land	279.6	0.4	3,409.0	0.2
Developed				
Developed, High Intensity	77.7	0.1	2,028.7	0.1
Developed, Medium Intensity	204.8	0.3	5,013.0	0.3
Developed, Low Intensity	394.7	0.5	10,073.2	0.6
Developed, Open Space	1009.7	1.4	57,934.2	3.2
Forest				
Deciduous Forest	33,842.3	45.3	952,653.1	52.9
Evergreen Forest	5,185.2	6.9	73,795.1	4.1
Mixed Forest	21.9	0.0	15,043.9	0.8
Shrubland				
Shrub/Scrub	81.3	0.1	50,171.5	2.8
Herbaceous				
Grassland/Herbaceous	208.4	0.3	48,035.1	2.7
Hay/Pasture	456.8	0.6	152,839.1	8.5
Planted/Cultivated				
Cultivated Crops	4,712.7	6.3	165,456.3	9.2
Wetlands/Open Water				
Woody Wetlands	21,508.3	28.8	89,585.0	5.0
Emergent Herbaceous Wetlands	2,282.3	3.1	10,048.2	0.6
Open Water	4,448.0	6.0	163,980.9	9.1
Total	74,713.8	100	1,800,066.4	100

[1] Source: Homer et al. 2015

Oak-hickory deciduous forest is the most abundant forest type in the eastern U.S. and is prevalent in the Kentucky Reservoir region. Some mixed deciduous-evergreen and evergreen forests are also present in this region. Numerous bird species nest in deciduous forests. Typical species include wild turkey, whip-poor-will, ruby-throated hummingbird, red-eyed vireo, black-throated green warbler, black-and-white warbler, ovenbird, hooded warbler, and the scarlet tanager. Several additional migratory bird species of concern utilize these habitats in part or all of the region, including cerulean warbler, chuck-will's widow, Kentucky warbler, red-headed

woodpecker, wood thrush, and worm-eating warbler (USFWS 2016a). Common mammal species of deciduous forests include white-tailed deer, red bat, eastern chipmunk, eastern gray and southern flying squirrels, white-footed mouse, cotton mouse, gray fox, and bobcat.

Deciduous forests and mixed evergreen-deciduous forests account for 45 percent of the land cover within the Kentucky Reservoir parcels (Table 2-4). Evergreen forests make up an additional seven percent of the land cover. Seeps, streams, and temporary ponds in deciduous forests provide habitat for numerous amphibians including American and Fowler's toads, green frog, northern cricket frog, and other frogs, and a range of salamanders including spotted and mole salamanders. Reptiles commonly found in deciduous forests especially near water include eastern fence lizard, ground skink, five-lined skink, eastern box turtle, eastern wormsnake, and ring-necked snake. The riparian zones along streams within deciduous forests provide nesting habitat for Acadian flycatchers, northern parula, and some migratory species of concern in this area, the bald eagle, Bell's vireo, Bewick's wren, least bittern, Mississippi kite, prothonotary warbler, and willow flycatcher (USFWS 2016a).

Evergreen and mixed evergreen-deciduous forests provide nesting for woodland birds including pine and yellow-throated warblers, and great crested flycatcher. Several additional migratory bird species of concern utilize these habitats including chuck-will's widow, Kentucky warbler, fox sparrow, prairie warbler, and red crossbill (USFWS 2016a). Portions of this forest type have been damaged by southern pine beetles in recent years. Several stands of dead pines exist on TVA lands, and TVA has performed salvage harvests in some stands. Dead pines provide foraging sites for woodpeckers and may provide roosting sites for bats, including some federally-and/or state listed species. Other animals that inhabit evergreen and evergreen-deciduous forests but are not restricted to them include white-tailed deer, wild turkey, eastern mole, eastern kingsnake, smooth earthsnake, eastern fence lizard, and a variety of salamanders, frogs, and toads, especially near wet areas.

Non-forested herbaceous community types in the Kentucky Reservoir region are dominated by pasturelands and hayfields. Herbaceous habitats, including grasslands, barrens, hayfields, and pastures account for approximately one percent of the landcover on the reservoir parcels (Table 2-4). Early successional habitats provide habitat for a variety of bird species including eastern bluebird, eastern meadowlark, American crow, and red-tailed hawk. Several additional migratory bird species of concern utilize these habitats in this area including American kestrel, Bewick's wren, dickcissel, Henslow's sparrow, Le Conte's sparrow, sedge wren, short-eared

owl, and willow flycatcher (USFWS 2016a). Amphibians and reptiles that use these habitats include spring peeper, chorus frog, and common garter snake.

Bird and mammal diversity greatly increases at edge habitats especially those between forested areas bordered by early successional habitats. Birds commonly found at these edge habitats include wild turkey, great crested flycatcher, white-eyed vireo, Carolina wren, blue-gray gnatcatcher, brown thrasher, common yellowthroat, yellow-breasted chat, indigo bunting, eastern towhee, field and song sparrow, and orchard oriole. Several additional migratory bird species of concern utilize these habitats in this area including Bachman's sparrow, Bell's vireo, Bewick's wren, blue-winged warbler, dickcissel, loggerhead shrike, Mississippi kite, red-headed woodpecker, and willow flycatcher (USFWS 2016a). Mammals typically inhabiting edges include eastern cottontail, eastern harvest mouse, red fox, coyote, long-tailed weasel, and striped skunk.

The reservoir parcels provide wetlands, including wooded swamps and open water habitats, and associated riparian zones that are used by a variety of wildlife. Common species include great blue heron, green heron, belted kingfisher, common yellowthroat, and northern parula. Many additional migratory bird species of concern utilize these habitats in this area including American bittern, bald eagle, least bittern, Mississippi kite, prothonotary warbler, rusty blackbird, sedge wren, short-eared owl, and willow flycatcher (USFWS 2016a).A total of 18 colonial nesting bird colonies/heronries have been observed within 3 miles of Kentucky Reservoir, seven of these are on TVA parcels (TVA 2016a). Shallow embayments, especially those with emergent vegetation, provide foraging habitat for waterfowl. Common waterfowl include wood ducks, Canada geese, and mallards. Other waterfowl present periodically include American black duck, gadwall, green-winged teal, ring-necked duck, lesser scaup, common goldeneye, bufflehead, hooded merganser, and common merganser.

Shorebird use of the Kentucky Reservoir is limited to shallow embayments and exposed mud flats. Species such as spotted sandpiper that forage along the margins of reservoirs and killdeer that are not restricted to foraging on mud flats are commonly observed. Common amphibians found in the riparian zones include green frog, eastern narrowmouth toad, and Fowler's toad. Reptiles include northern watersnake, common snapping turtle, and painted turtles. Common mammals include mink, muskrat, raccoon, and American beaver.

A search of the TVA Natural Heritage database in May 2016 indicated that 36 caves are located within 3 miles of Kentucky Reservoir. One cave is located on a TVA parcel (TVA 2016a).

For information on terrestrial ecology and potential impacts of the draft RLMP, see Volume I, Section 3.5.

2.2.3.1 Invasive Nonnative Species

Many of the planned TVA parcels around Kentucky Reservoir contain a substantial amount of invasive nonnative species. Executive Order (EO) 13112 defines an invasive nonnative species as any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem; and whose introduction does or is likely to cause economic or environmental harm or harm to human health.

Based on a data search conducted on the USDA Natural Resources Conservation Service (NRCS) PLANTS Database (USDA, NRCS 2016b), hydrilla (*Hydrilla verticillata*) is the only plant contained on the Federal Noxious Weed List of 2010 reported from the counties encompassing Kentucky Reservoir. In addition, Southeastern Exotic Plant Pest Council (SE-EPPC 2006) provides a list of nonnative invasive species that could pose potential threats to native ecosystems and human health for each southeastern state.

In reviewing the Tennessee exotic plant pest list (Tennessee Exotic Plant Pest Council 2009), there were 26 species occurring in Tennessee that pose a severe threat to native ecosystems observed in the Great Falls Reservoir region (Table 2-5). The Kentucky exotic plant pest list contains many of the same species as the Tennessee list with the addition of 14 species that pose a severe threat (KY-EPPC 2013).

Table 2-5. Invasive Non-native Plant Species that Pose a Severe Threat Known to Occur in Tennessee and Kentucky

State Present[1]	Common Name	Scientific Name
TN, KY	Asian bittersweet	*Celastrus orbiculatus*
TN, KY	Autumn olive	*Elaeagnus umbellata var. parviflora*
KY	Bush honeysuckle (amur)	*Lonicera maackii*
KY	Callery pear (Bradford)	*Pyrus calleryana*
TN	Cheat grass	*Bromus tectorum*
KY	Chickweed	*Stellaria media*
TN, KY	Chinese privet	*Ligustrum sinense*
KY	Chinese silver grass	*Miscanthus sinensis*
TN, KY	Chinese yam	*Dioscorea oppositifolia*

State Present[1]	Common Name	Scientific Name
TN	Common privet	*Ligustrum vulgare*
KY	Common reed	*Phragmites australis*
TN	Common St. John's-wort	*Hypericum perforatum*
KY	Crown vetch	*Coronilla varia*
KY	Garlic mustard	*Alliaria petiolata*
TN	Hydrilla	*Hydrilla verticillata*
TN, KY	Japanese honeysuckle	*Lonicera japonica*
TN, KY	Japanese knotweed	*Polygonum cuspidatum*
TN, KY	Japanese stiltgrass	*Microstegium vimineum*
TN, KY	Johnson grass	*Sorghum halepense*
KY	Kentucky fescue	*Festuca arundinacea*
TN	Korean clover	*Kummerowia stipulacea*
TN, KY	Kudzu	*Pueraria montana var. lobata*
TN	Mimosa	*Albizia julibrissin*
TN, KY	Multiflora rose	*Rosa multiflora*
KY	Musk thistle	*Carduus nutans*
KY	Poison hemlock	*Conium maculatum*
TN, KY	Princess tree	*Paulownia tomentosa*
TN, KY	Purple loosestrife	*Lythrum salicaria*
TN, KY	Sericia lespedeza	*Lespedeza cuneata*
TN	Shrubby bushclover	*Lespedeza bicolor*
TN, KY	Tree of heaven	*Ailanthus altissima*
KY	Winged euonymus (burning bush)	*Euonymus alatus*
KY	Winter creeper	*Euonymus fortunei*
KY	White sweet clover	*Melilotus alba*
KY	Yellow sweet clover	*Melilotus officinalis*

[1] KY=Kentucky, TN=Tennessee; State is listed if this species was contained on the Severe Threat list in Tennessee or Kentucky The Severe Threat lists contain plants with the highest potential for adverse impacts to native communities.

Sources: Tennessee Exotic Plant Pest Council 2009; Kentucky Exotic Pest Plant Council 2015

All of these species have the potential to adversely impact the native plant communities because of their potential to spread rapidly and displace native vegetation. TVA considers all of the species a severe threat to local plant communities.

In addition to invasive or non-native plant species discussed above, there are several exotic, non-native, and/or pest insect species and plant diseases that are known to occur within the counties encompassing Kentucky Reservoir. These insects and diseases can have devastating

impacts on native plant communities and human crops/fruits. The insects include: Japanese beetle, (*Popillia japonica*), kudzu bug (*Megacopta cribraria*), southern pine beetle (*Dendroctonus frontalis*), and sugarcane aphid (*Melanaphis sacchari*) (EDDMapS 2016). These species all have the potential to pose problems to native vegetation, wildlife, crops, landscaping and gardens, and/or overall ecosystems due to the lack of natural predators or diseases to help control their populations giving them the ability to out-compete native species.

The following plant diseases are also known to occur in the counties containing the Kentucky Reservoir: butternut canker (*Sirococcus clavigignenti-juglandacearum*), fusiform rust (*Cronartium quercuum* f.sp. *fusiforme*), Heterobasidion root rots (*Heterobasidion* spp.), and oak wilt (*Ceratocystis fagacearum*). Many of these diseases target certain plant species or groups of species, and can have serious impacts to local populations of those plants and trees.

2.2.4 Aquatic Ecology

Streams of the Highland Rim and Nashville Basin ecoregions are characterized by coarse chert gravel and sand substrates interspersed with bedrock areas, moderate gradients, clear waters, and moderate to low productivity, and thus little aquatic vegetation except near spring sources (Etnier and Starnes 1993). The Highland Rim, because of its geologic complexity and numerous semi-independent drainage systems, harbors the most diverse fish fauna of any region of comparable size in North America. As discussed in Section 2.2.8, TVA has improved water quality below many of its hydroelectric facilities including implementation of measures designed to mimic more natural riverine conditions.

Aquatic ecological conditions in streams and reservoirs are monitored under a number of TVA programs. Aquatic ecological conditions in the larger reservoirs have been monitored using the Reservoir Vital Signs Monitoring Program (RVSMP), which focuses on (1) physical and chemical characteristics of waters; (2) physical and chemical characteristics of sediments; (3) sampling the benthic macroinvertebrate community; and (4) fish assemblage sampling. The RVSMP data include annual fish sampling on tributary reservoirs on a two-year rotation sampling cycle. Ratings are based primarily on fish community structure and function, using an analysis tool known as the Reservoir Fish Assemblage Index (RFAI) (McDonough and Hickman 1999).

Both RFAI and benthic community samples were taken in the forebay area (near the dam) and transition zone of Kentucky Reservoir where the reservoir transitions from a river-like environment to a lake-like environment (Table 2-6).

Table 2-6. RFAI and Benthic Community Scores for Kentucky Reservoir (2011-2015)

Year	RFAI Scores		Benthic Community Scores	
	Forebay	Transition	Forebay	Transition
2011	Good	Good	Good	Good
2013	Good	Good	Good	Good
2015	Fair	Good	Good	Good

Source: TVA 2016b

The RFAI scores for the Kentucky Reservoir were good for all of the samples since 2011 with the exception of the forebay in 2015, which rated fair. The fish species collected during the RVSMP sampling efforts represent typical species found in large river and lentic habitats (Table 2-7). The benthic community scores have consistently rated good at both locations since 2011.

Table 2-7. Fish Species in Kentucky Reservoir

Common Name	Scientific Name
American eel	*Anguilla rostrata*
Atlantic needlefish	*Strongylura marina*
Bighead carp	*Hypophthalmichthys nobilis*
Bigmouth buffalo	*Ictiobus cyprinellus*
Black buffalo	*Ictiobus niger*
Black crappie	*Pomoxis nigromaculatus*
Black redhorse	*Moxostoma duquesnei*
Blackstripe topminnow	*Fundulus notatus*
Blue catfish	*Ictalurus furcatus*
Bluegill	*Lepomis macrochirus*
Bowfin	*Amia calva*
Brook silverside	*Labidesthes sicculus*
Bullhead minnow	*Pimephales vigilax*
Chain pickerel	*Esox niger*
Channel catfish	*Ictalurus punctatus*
Chestnut lamprey	*Ichthyomyzon castaneus*
Common carp	*Cyprinus carpio*
Emerald shiner	*Notropis atherinoides*
Flathead catfish	*Pylodictis olivaris*
Freshwater drum	*Aplodinotus grunniens*
Gizzard shad	*Dorosoma cepedianum*
Golden redhorse	*Moxostoma erythrurum*
Golden shiner	*Notemigonus crysoleucas*
Goldfish	*Carassius auratus*
Grass carp	*Ctenopharyngodon idella*

Common Name	Scientific Name
Green sunfish	*Lepomis cyanellus*
Hybrid striped x white bass	*Hybrid morone (chrysops x sax)*
Largemouth bass	*Micropterus salmoides*
Largescale stoneroller	*Campostoma oligolepis*
Logperch	*Percina caprodes*
Longear sunfish	*Lepomis megalotis*
Longnose gar	*Lepisosteus osseus*
Mimic shiner	*Notropis volucellus*
Mississippi silverside	*Menidia audens*
Northern hog sucker	*Hypentelium nigricans*
Pugnose minnow	*Opsopoeodus emiliae*
Quillback	*Carpiodes cyprinus*
Rainbow darter	*Etheostoma caeruleum*
Redbreast sunfish	*Lepomis auritus*
Redear sunfish	*Lepomis microlophus*
River carpsucker	*Carpiodes carpio*
River darter	*Percina shumardi*
River redhorse	*Moxostoma carinatum*
Rock bass	*Ambloplites rupestris*
Saddleback darter	*Percina vigil*
Sauger	*Stizostedion canadense*
Silver carp	*Hypophthalmichthys molitrix*
Silver chub	*Macrhybopsis storeriana*
Silver redhorse	*Moxostoma anisurum*
Skipjack herring	*Alosa chrysochloris*
Slabrock darter	*Etheostoma smithi*
Smallmouth bass	*Micropterus dolomieu*
Smallmouth buffalo	*Ictiobus bubalus*
Smallmouth redhorse	*Moxostoma breviceps*
Spotfin shiner	*Cyprinella spiloptera*
Spotted bass	*Micropterus punctulatus*
Spotted gar	*Lepisosteus oculatus*
Spotted sucker	*Minytrema melanops*
Streamline chub	*Erimystax dissimilis*
Striped bass	*Morone saxatilis*
Stripetail darter	*Etheostoma kennicotti*
Threadfin shad	*Dorosoma petenense*
Warmouth	*Lepomis gulosus*
White bass	*Morone chrysops*
White crappie	*Pomoxis annularis*
Yellow bass	*Morone mississippiensis*
Yellow bullhead	*Ameiurus natalis*
Yellow perch	*Perca flavescens*

Source: TVA 2016c

2.2.4.1 Invasive Nonnative Aquatic Species

Although there are many exotic or introduced aquatic species within the region, there are a few species that are considered more detrimental due to their ability to have broad impacts to overall aquatic systems as well as direct impacts to humans. These include Asian carp, especially bighead carp (*Hypophthalmichthys nobilis*) and silver carp (*Hypophthalmichthys molitrix*) (EDDMapS 2016), and zebra mussels (*Dreissena polymorpha*).

Asian carp cause serious damage to the native fish populations in the lakes and rivers that they infest because they out-compete other fish for food and space. Carp are also thought to lower water quality, which can kill off sensitive organisms like native freshwater mussels. Asian carp have been known to dominate entire streams, effectively pushing out the native species. Asian carp are also known to pose danger to humans due to their habit of jumping out of the water and striking boaters and water skiers and damaging boats and equipment.

Zebra mussels are notorious for their biofouling capabilities by colonizing water supply pipes of hydroelectric and nuclear power plants, public water supply plants, and industrial facilities. They colonize pipes constricting flow, therefore reducing the intake in heat exchangers, condensers, firefighting equipment, and air conditioning and cooling systems. Navigational and recreational boating can be affected by increased drag due to attached mussels. Small mussels can get into engine cooling systems causing overheating and damage. Navigational buoys have been sunk under the weight of attached zebra mussels. Zebra mussels can have profound effects on the ecosystems they invade. They primarily consume phytoplankton, but other suspended material is filtered from the water column including bacteria, protozoans, zebra mussel veligers, other microzooplankton and silt (Benson et al. 2016).

For information on aquatic ecology and potential impacts of the draft RLMP, see Volume I, Section 3.6.

2.2.5 Threatened and Endangered Species

TVA biologists and natural resource specialists used the TVA Natural Heritage database to assess the endangered and threatened species within and around Kentucky Reservoir. The TVA Natural Heritage database was created to ensure that environmental compliance activities are conducted in a consistent manner across the TVA Region and that these activities meet the requirements of National Environmental Policy Act (NEPA) and the Endangered Species Act. The federally-listed and state-listed species identified from the TVA Natural Heritage database searches that are known to occur in the counties surrounding Kentucky Reservoir are presented

in Table 2-8. For the purpose of this document state-listed species includes those that are being tracked, in need of management, candidates, proposed for listing and of special concern. As noted below, there are 21 listed plant species that known to occur on TVA parcels on Kentucky Reservoir. There are 13 terrestrial wildlife species known to occur on TVA parcels, however, suitable habitat is present for many of the other listed species. Three listed aquatic species are known to occur within TVA parcels, and an additional 40 species are known to occur in the reservoir adjacent to the parcels.

Table 2-8. Federally and State-Listed Species in the Kentucky Reservoir Counties

Common Name	Scientific Name	Status*	
		Federal	State (Rank)
Amphibians			
Barking treefrog	*Hyla gratiosa*	--	SPCO (S3) –KY
Bird-voiced treefrog	*Hyla avivoca*	--	SPCO (S3) –KY
Four-toed salamander	*Hemidactylium scutatum*	--	D (S3) –TN
Green treefrog	*Hyla cinerea*	--	SPCO (S3) –KY
Hellbender	*Cryptobranchus alleganiensis*	PS	D (S3) -TN
Northern crawfish frog	*Rana areolata circulosa*	--	SPCO (S3) -KY
Three-lined salamander	*Eurycea guttolineata*	--	T (S2) –KY
Birds			
American bittern	*Botaurus lentiginosus*	--	HIST (SHB) –KY
Anhinga	*Anhinga*	--	D (S1B) –TN
Bachman's sparrow	*Peucaea aestivalis*	--	E (S1) –KY
Bald eagle	*Haliaeetus leucocephalus*	DM	T (S2) –KY D (S3) –TN
Bank swallow	*Riparia*	--	SPCO (S3) –KY
Bewick's wren	*Thryomanes bewickii*	--	E (S1) –TN
Black-crowned night-heron	*Nycticorax*	--	T (S1S2) –KY
Blue-winged teal	*Anas discors*	--	T (S1S2) –KY
Brown creeper	*Certhia Americana*	--	E (S1S2)
Cattle egret	*Bubulcus ibis*	--	SPCO (S1S2) –KY
Cerulean warbler	*Setophaga cerulean*	--	D (S3B) –TN
Common barn-owl	*Tyto alba*	--	SPCO (S3) –KY D (S3) –TN
Golden eagle	*Aquila chrysaetos*	--	T (S1) –TN
Great egret	*Ardea alba*	--	E (S1B) –KY D (S2B,S3N) –TN
Henslow's sparrow	*Ammodramus henslowii*	--	SPCO (S3B) –KY

Common Name	Scientific Name	Status*	
		Federal	State (Rank)
			D (S1B) –TN
Interior least tern	*Sterna antillarum athalassos*	LE	E (S2S3B) –KY
Lark sparrow	*Chondestes grammacus*	--	T (S2S3) –TN
Little blue heron	*Egretta caerulea*	--	E (S1) –KY D (S2B,S3N) –TN
Osprey	*Pandion haliaetus*	--	T (S2) –KY
Pied-billed grebe	*Podilymbus podiceps*	--	E (S1) –KY
Piping plover	*Charadrius melodus*	LE	TRKD (S2N) –TN
Sedge wren	*Cistothorus platensis*	--	SPCO (S3B) –KY
Swainson's warbler	*Limnothlypis swainsonii*	--	D (S3) –TN
Vesper sparrow	*Pooecetes gramineus*	SC	E (S1) –KY D (S1BS4N) –TN
Yellow-crowned night-heron	*Nyctanassa violacea*	--	T (S2) –KY
Crustaceans			
A crayfish	*Orconectes alabamensis*	--	D –TN
A crayfish	*Orconectes wright*	--	E (S2) -TN
Mammoth cave crayfish	*Orconectes pellucidus*	--	SPCO (S3) -KY
Fish			
Alligator gar	*Atractosteus spatula*	--	E (S1) –KY
Ashy darter	*Etheostoma cinereum*	--	T (S2S3) –TN
Black buffalo	*Ictiobus niger*	--	SPCO (S3) –KY
Blotched chub	*Erimystax insignis*	--	E (S1) –KY
Blotchside logperch	*Percina burtoni*	--	D (S2) –TN
Blue sucker	*Cycleptus elongates*	--	T (S2) –TN
Chain pickerel	*Esox niger*	--	SPCO (S3) –KY
Chestnut lamprey	*Ichthyomyzon castaneus*	--	SPCO (S2) –KY
Coppercheek darter	*Etheostoma aquali*	--	T (S2S3) –TN
Crown darter	*Etheostoma corona*	--	E (S1S2) –TN
Cypress darter	*Etheostoma proeliare*	--	T (S2) -KY
Firebelly darter	*Etheostoma pyrrhogaster*	--	D (S2) –TN
Flame chub	*Hemitremia flammea*	--	D (S3) –TN
Golden darter	*Etheostoma denoncourti*	--	D (S2) -TN
Goldstripe darter	*Etheostoma parvipinne*	--	E (S1) -KY
Highfin carpsucker	*Carpiodes velifer*	--	D (S2S3) –TN
Lake chubsucker	*Erimyzon sucetta*	--	T (S2) –KY
Lake sturgeon	*Acipenser fulvescens*	--	E (S1) -KY
Lollipop darter	*Etheostoma neopterum*	--	TRKD (S1S2) –TN
Northern madtom	*Noturus stigmosus*	--	D (S3) –TN
Pygmy madtom	*Noturus stanauli*	LE	E (S1) -TN
Redspotted sunfish	*Lepomis miniatus*	--	T (S2) –KY
Saddled madtom	*Noturus fasciatus*	--	T (S2) –TN

Common Name	Scientific Name	Status*	
		Federal	State (Rank)
Silver lamprey	*Ichthyomyzon unicuspis*	--	D (S2) –TN
Slackwater darter	*Etheostoma boschungi*	LT	T (S1) –TN
Slenderhead darter	*Percina phoxocephala*	--	D (S3) –TN
Smallscale darter	*Etheostoma microlepidum*	--	E (S1) -KY
Southern brook lamprey	*Ichthyomyzon gagei*	--	D (S1) –KY/TN
Southern cavefish	*Typhlichthys subterraneus*	--	SPCO (S2S3) –KY D (S3) –TN
Tuscumbia darter	*Etheostoma Tuscumbia*	--	D (SX) -TN
Gastropods			
Armored rocksnail	*Lithasia armigera*	--	SPCO (S3S4) –KY TRKD (S1S2) –TN
Helmet rocksnail	*Lithasia duttoniana*	--	TRKD (S2) –KY
Muddy rocksnail	*Lithasia salebrosa*	--	TRKD (S3S4) –KY TRKD (S2) –TN
Ornate rocksnail	*Lithasia geniculata*	--	SPCO (S1) –KY TRKD (S2) –TN
Rugged hornsnail	*Pleurocera alveare*	--	TRKD (S2) –TN
Rugose rocksnail	*Lithasia jayana*	--	TRKD (SX) –TN
Shortspire hornsnail	*Pleurocera curta*	--	SPCO (S2) –KY TRKD (S2) –TN
Varicose rocksnail	*Lithasia verrucosa*	--	SPCO (S3S4) -TN
Insects			
A cave obligate beetle	*Pseudanophthalmus hesperus*	--	TRKD (S1) -TN
Acuminate snaketail	*Ophiogomphus acuminatus*	--	TRKD (S2) -TN
American burying beetle	*Nicrophorus americanus*	LE	HIST (SH) –KY TRKD (SH) –TN
Margaret's river cruiser	*Macromia margarita*	--	TRKD (S2S3) -TN
Mammals			
Allegheny woodrat	*Neotoma magister*	--	D (S3) –TN
Common shrew	*Sorex cinereus*	--	SPCO (S3) –KY D (S4) –TN
Evening bat	*Nycticeius humeralis*	--	SPCO (S3) –KY
Gray bat	*Myotis grisescens*	LE	T (S2) –KY E (S2) –TN
Indiana bat	*Myotis sodalis*	LE	E (S1S2) –KY E (S1) –TN
Meadow jumping mouse	*Zapus hudsonius*	PS	D (S4) –TN
Northern long-eared bat	*Myotis septentrionalis*	LT	E (S3) –KY -- (S1S2) –TN/TN
Pygmy shrew	*Sorex hoyi*	--	TRKD (S2) –TN
Southeastern bat	*Myotis austroriparius*	--	E (S1S2) –KY

Common Name	Scientific Name	Status*	
		Federal	State (Rank)
Southeastern shrew	*Sorex longirostris*	--	D (S4) -TN
Mussels			
Birdwing pearlymussel	*Lemiox rimosus*	LE	E (S1) –TN
Clubshell	*Pleurobema clava*	LE	E (SH) –TN
Cracking pearlymussel	*Hemistena lata*	LE	E (S1) –TN
Fanshell	*Cyprogenia stegaria*	LE	E (S1) –KY/TN
Fat pocketbook	*Potamilus capax*	LE	E (S1) –KY
Little spectaclecase	*Villosa lienosa*	--	SPCO (S3S4) –KY
Orange-foot pimpleback	*Plethobasus cooperianus*	LE	E (S1) –KY/TN
Pink heelsplitter	*Potamilus alatus*	--	TRKD (S2) –TN
Pink mucket	*Lampsilis abrupta*	LE	E (S1) –KY E (S2) –TN
Pistolgrip	*Tritogonia verrucosa*	--	--(S4S5) –KY -- (S4) –TN
Pocketbook	*Lampsilis ovata*	--	E (S1) –KY
Purple lilliput	*Toxolasma lividus*	--	TRKD (S1S2) –TN
Pyramid pigtoe	*Pleurobema rubrum*	--	E (S1) –TN
Rabbitsfoot	*Quadrula cylindrica*	LT	--
Ring pink	*Obovaria retusa*	LE	E (S1) -TN
Rough pigtoe	*Pleurobema plenum*	LE	E (S1) –TN
Salamander mussel	*Simpsonaias ambigua*	--	TRKD (S1) –TN
Sheepnose	*Plethobasus cyphyus*	LE	E (S1) –KY TRKD (S2S3) –TN
Slabside pearlymussel	*Pleuronaia dolabelloides*	LE	TRKD (S2) –TN
Smooth rabbitsfoot	*Quadrula cylindrica*	LT	T (S2) –KY TRKD (S3) –TN
Spectaclecase	*Cumberlandia monodonta*	LE	TRKD (S2S3) –TN
White wartyback	*Plethobasus cicatricosus*	LE	E (S1) -TN
Reptiles			
Alligator snapping turtle	*Macrochelys temminckii*	--	D (S2S3) –TN
Coal skink	*Plestiodon anthracinus*	--	T (S2) -KY
Copperbelly water snake	*Nerodia erythrogaster neglecta*	--	SPCO (S3) –KY
Eastern ribbon snake	*Thamnophis sauritus*	--	SPCO (S3) –KY
Midland smooth softshell	*Apalone mutica*	--	SPCO (S3) –KY
Northern pine snake	*Pituophis melanoleucus*	--	T (S3) –KY T (S2) –TN
Scarlet kingsnake	*Lampropeltis triangulum elapsoides*	--	SPCO (S3) –KY
Southeastern five-lined skink	*Eumeces inexpectatus*	--	SPCO (S3) –KY
Western pigmy rattlesnake	*Sistrurus miliarius streckeri*	--	T (S2) –KY T (S2S3) –TN

Common Name	Scientific Name	Status*	
		Federal	State (Rank)
Plants			
American ginseng	*Panax quinquefolius*	--	S-CE (S3S4) –TN
Barbed rattlesnake-root	*Prenanthes barbata*	--	SPCO (S2) –TN
Barrens silky aster	*Symphyotrichum pratense*	--	E (S1) –TN
Blackfoot quillwort	*Isoetes melanopoda*	--	E (S1S2) –TN
Bladderpod	*Lesquerella lescurii*	--	HIST (SH) –KY
Blue sage	*Salvia azurea* var. *grandiflora*	--	SPCO (S3) –TN
Buckley's goldenrod	*Solidago buckleyi*	--	SPCO (S2S3) –KY
Bull-grass	*Paspalum boscianum*	--	SPCO (S2S3) –KY
Bunchflower	*Melanthium virginicum*	--	E (S1) –KY/TN
Butternut	*Juglans cinerea*	--	T (S2S3) –KY T (S3) –TN
Button snakeroot	*Eryngium integrifolium*	--	T (S1) –KY/TN
Carolina anglepod	*Matelea carolinensis*	--	E (S1?) –KY
Common silverbell	*Halesia carolina*	--	E (S1S2) –KY
Compass plant	*Silphium laciniatum* var. *robinsonii*	--	T (S2) –TN
Compass-plant	*Silphium laciniatum*	--	T (S2) –KY
Cream wild indigo	*Baptisia bracteata* var. *leucophaea*	--	SPCO (S3) –KY SPCO (S1S2) –TN
Creamflower tick-trefoil	*Desmodium ochroleucum*	--	E (S1) –TN
Deam's copperleaf	*Acalypha deamii*	--	SPCO (S1) –TN
Downy phlox	*Phlox pilosa ssp. ozarkana*	--	SPCO (S1S2) –TN
Flat-stemmed spike-rush	*Eleocharis compressa*	--	SPCO (S1) –TN
Fraser loosestrife	*Lysimachia fraseri*	--	E (S2) –TN
Grassleaf arrowhead	*Sagittaria graminea*	--	T (S1S2) –KY
Grassleaf mud-plantain	*Heteranthera dubia*	--	SPCO (S3) –KY
Great plains ladies'-tresses	*Spiranthes magnicamporum*	--	E (S1) –TN
Hair-like mock bishop-weed	*Ptilimnium capillaceum*	--	T (S1S2) –KY
Hairy fimbristylis	*Fimbristylis puberula*	--	T (S1S2) –TN
Hairy hawkweed	*Hieracium longipilum*	--	T (S2) –KY SPCO (S1) –TN
Hairy umbrella-sedge	*Fuirena squarrosa*	--	SPCO (S1) –TN
Halberd-leaf tearthumb	*Polygonum arifolium*	--	T (S1) –TN
Heller's catfoot	*Pseudognaphalium helleri*	--	SPCO (S2) –TN
Hoary azalea	*Rhododendron canescens*	--	E (S1) –KY
Horsesugar	*Symplocos tinctoria*	--	SPCO (S2) –TN
Lady-slipper	*Cypripedium kentuckiense*	--	E (S2) –TN
Lake-cress	*Armoracia lacustris*	--	T(S1S2) –KY SPCO (S2) –TN
Lamance iris	*Iris brevicaulis*	--	E (S1) –TN

Common Name	Scientific Name	Status*	
		Federal	State (Rank)
Loesel's twayblade	*Liparis loeselii*	--	T (S1) –TN
Longleaf stitchwort	*Stellaria longifolia*	--	SPCO (S2S3) –KY
Maryland milkwort	*Polygala mariana*	--	SPCO (S1) –TN
Mock-orange	*Philadelphus inodorus*	--	T (S1S2) –KY
Mountain-mint	*Pycnanthemum albescens*	--	HIST (SH) –KY
Muhly	*Muhlenbergia glabrifloris*	--	SPCO (S2S3) –KY
Naiad	*Najas gracillima*	--	SPCO (S2S3) –KY
naked-stem sunflower	*Helianthus occidentalis*	--	SPCO (S2) –TN
Northern dropseed	*Sporobolus heterolepis*	--	E (S1) –KY
Nuttall's mock bishop's-weed	*Ptilimnium nuttallii*	--	E (S1S2) –KY
Oldenlandia	*Oldenlandia uniflora*	--	E (S1) –KY
Ovate catchfly	*Silene ovata*	--	E (S2) -TN
Possum-haw viburnum	*Viburnum nudum*	--	E (S1) –KY
Prairie junegrass	*Koeleria macrantha*	--	E (S1) –KY
Prairie redroot	*Ceanothus herbaceous*	--	T (S2) –KY
Price's potato-bean	*Apios priceana*	LT	E (S3) –KY E (S1) –TN
Purple milkweed	*Asclepias purpurascens*	--	SPCO (S1) –TN
River bulrush	*Bolboschoenus fluviatilis*	--	SPCO (S1) –TN
Rough dropseed	*Sporobolus clandestinus*	--	T (S2S3) –KY
Rough pennyroyal	*Hedeoma hispida*	--	T (S2) –KY
Rough rattlesnake-root	*Prenanthes aspera*	--	E (S1) –KY T (S1) –TN
Sand grape	*Vitis rupestris*	--	E (S1) –TN
Screwstem	*Bartonia virginica*	--	T (S2) –KY
Sedge	*Carex hirtifolia*	--	SPCO (S1S2) –TN
Sedge	*Carex lacustris*	--	T (S1) –TN
Sedge	*Carex reniformis*	--	SPCO (S1) –TN
Sedge	*Carex comosa*	--	T (S2) –TN
September elm	*Ulmus serotine*	--	SPCO (S3) –KY
Short-beak arrowhead	*Sagittaria brevirostra*	--	T (S1) –TN
Short-head rush	*Juncus brachycephalus*	--	SPCO (S2) –TN
Short's rock-cress	*Boechera shortii*	--	SPCO (S1S2) -TN
Slender blazing-star	*Liatris cylindracea*	--	T (S2) –TN
Small sundrops	*Oenothera perennis*	--	E (S1S2) –KY
Smaller mud-plantain	*Heteranthera limosa*	--	T (S1S2) –KY/TN
Southern bog clubmoss	*Lycopodiella appressa*	--	E (S1) –KY
Southern morning-glory	*Stylisma humistrata*	--	T (S1) –TN
Spike-rush	*Eleocharis intermedia*	--	E (S1) –TN

Common Name	Scientific Name	Status*	
		Federal	State (Rank)
Spreading false-foxglove	*Aureolaria patula*	--	SPCO (S3) –TN
Sundrops	*Oenothera linifolia*	--	E (S1S2) –KY
Swamp lousewort	*Pedicularis lanceolata*	--	SPCO (S1S2) –TN
Swamp wedgescale	*Sphenopholis pensylvanica*	--	SPCO (S1S2) –KY
Sweet coneflower	*Rudbeckia subtomentosa*	--	E (S1) –KY T (S2) –TN
Sweetscent ladies'-tresses	*Spiranthes odorata*	--	E (S1) -TN
Sweet-scented Indian-plantain	*Hasteola suaveolens*	--	SPCO (S2) –TN
Tower-mustard	*Turritis glabra*	--	SPCO (S1) -TN
Trepocarpus	*Trepocarpus aethusae*	--	SPCO (S3) –KY
Turk's cap lily	*Lilium superbum*	--	T (S1S2) –KY
Virginia rose	*Rosa virginiana*	--	SPCO (SH) –TN
Walter's barnyard grass	*Echinochloa walteri*	--	SPCO (S1) –TN
Water-milfoil	*Myriophyllum pinnatum*	--	E (S1) –TN
Water-purslane	*Didiplis diandra*	--	T (S1) –TN
Wedge-leaf Whitlow-grass	*Draba cuneifolia*	--	SPCO (S1S2) –TN
Western false gromwell	*Onosmodium molle* ssp. *occidentale*	--	T (S1S2) –TN
Western hairy rock-cress	*Arabis hirsute*	--	T (S1) –TN
Yellow trout-lily	*Erythronium rostratum*	--	SPCO (S2) -TN

***Federal status abbreviations**: LE = Listed endangered, LT = Listed threatened; PS = Partial status; SC = Species of Concern; DM = Recovered, delisted, and being monitored

State status abbreviations: E = Endangered; T = Threatened; D = In need of management; NOST = No status; SPCO= Special concern; TRKD = Tracked by state natural heritage program; S-CE = Special Concern - Commercially Exploited; HIST = Historically known from the area, may be extirpated or extinct

State rank abbreviations: S1 = Critically imperiled, often with five or fewer occurrences, S2 = Imperiled, often with <20 occurrences; S3 = Rare or uncommon, often with <80 occurrences; S4 = Widespread, abundant, and apparently secure within the state, but with cause for long-term concern; SX = Believed to be extirpated from the state; SH = Of historical occurrence in the state, e.g. formally part of the established biota, with the expectation that it may be rediscovered; S#S# = Denotes a range of ranks because the exact rarity of the element is uncertain (e.g., S1S2); S? = Unranked at this time or rank uncertain; B = Breeds in the state; N = occurs in the state in a non-breeding status ?

Source: TVA 2016a

In order to determine which of the species listed in each county are known to occur in the general vicinity of the reservoir, a more refined database search was conducted. Database searches are based on the following criteria: (1) distance, (2) element occurrence rank values, and (3) species or type of element present. Accordingly, plants are assessed within a 5-mile radius, aquatic species within a 10-mile radius, and terrestrial species within a 3-mile radius. For information on threatened and endangered species and the potential impacts of the draft RLMP, see Volume I, Section 3.7.

2.2.5.1 Plants

Reviews of the TVA Natural Heritage database indicated within the 15 surrounding counties of Kentucky Reservoir, there are one federally listed and 90 state-listed plant species (see Table 2-8). One federally listed species and 83 state-listed species have been recorded within 5 miles of Kentucky Reservoir. These species and their habitat requirements are discussed in Table 2-9.

Records of 21 listed species are located within TVA parcels. The majority of these records are on parcels that would be allocated to Zone 3 (Sensitive Resource Management), Zone 4 (Natural Resources Conservation) or Zone 6 (Developed Recreation). In addition, there are populations of bunchflower and swamp wedgescale that occur on parcels that would be allocated to Zone 7 (Shoreline Access), and one record of lamance iris on a Zone 2 (Project Operations) parcel.

Table 2-9. Habitat Requirements for Plant Species of Conservation Concern within 5 Miles of Kentucky Reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
Allegheny-spurge	Rich woods with limestone substrate[1]	Yes
American bladdernut	Wet deciduous forests[2]	Yes
American ginseng	Rich moist hardwood dominated woods under a closed canopy[4]	Yes
Barbed rattlesnake-root	Barrens and dry woodlands[3]	Yes
Barrens silky aster	Barrens[3]	Yes
Black bugbane	Moist, mix deciduous woods, ravines, creek margins, thickets, moist weadows[2]	Yes
Blackfoot quillwort	Seasonal streambeds and wet depressions[3]	Yes
Blue sage	Barrens[1]	Yes
Buckley's goldenrod	Mesic woods[2]	Yes
Bunchflower	Wet woods And fields[3]	Yes
Butternut	Rich woods and hollows[3]	Yes
Button snakeroot	Wet barrens[3]	Yes
Canada wild-ginger	Deciduous forests[2]	Yes
Carolina anglepod	Moist woods and thickets, riverbanks, infrequently in ditches.[4]	Likely
Carolina silverbell	Moist, slightly acidic soils, floodplain woods, stream banks, swamp borders[2]	Yes Recorded in a TVA Zone 3 parcel
Carolina willow	Alluvial woods[2]	Likely
Cream wild indigo	Upland[3]	Likely
Creamflower tick-trefoil	Sandy dry woods[3]	Likely
Deam's copperleaf	Mesic woods, sandbars[3]	Likely
Downy phlox	Rocky dry, open woods[3]	Likely

Common Name	Habitat Requirements	Suitable Habitat Present
Epiphytic sedge	Swamps and wetlands, often on at the base of cypress trees or on rotting logs and stumps.[4]	Yes Recorded in a TVA Zone 3 parcel
Flat-stemmed spike-rush	Wet limestone glades[3]	Likely
Fraser loosestrife	Dry open woods[3]	Yes Recorded in a TVA Zone 4 parcel
Grassleaf arrowhead	Pond and stream margins[3]	Likely
Grassleaf mud-plantain	Submerged or floating aquatic plant[x]	Likely
Great plains ladies'-tresses	Glades	Likely
Greek valerian	Moist soils in deciduous woodlands[5]	Likely
Green violet	Rich limestone soils in woodlands, ravines, and on slopes[2]	Likely
Hair-like mock bishop-weed	Wetlands[1]	Yes Recorded in TVA Zone 3 and 4 parcels
Hairy fimbristylis	Wet prairies and woods[3]	Likely
Hairy hawkweed	Dry fields and sandy roadbanks[3]	Likely
Hairy umbrella-sedge	Stream and lake margins[3]	Likely
Halberd-leaf tearthumb	Wetlands and marshes[3]	Yes Recorded in a TVA Zone 3 parcel
Heart-leaved foam-flower	Woods along streams[2]	Likely
Hoary azalea	Moist to dry woods, often along streams[2]	Likely
Horsesugar	Floodplains and moist ravines	Likely
Hydrolea	Ponds and swamps[3]	Likely
Lady-slipper	Riparian forests[3]	Likely
Lake-cress	Open water of natural lakes, sloughs, ponds, canals, ditches, and swamps[x]	Likely
Lamance iris	Bottomlands[3]	Yes Recorded in TVA Zone 2 and 3 parcels
Loesel's twayblade	Calcareous seeps[3]	Yes Recorded in a TVA Zone 4 parcel
Longleaf stitchwort	Bogs[3]	Yes Recorded in a TVA Zone 4 parcel
Maryland milkwort	Sandy alluvial woods and disturbed areas[3]	Likely
Mock-orange	Moist rocky woods and streambanks[1]	Likely
Mountain-mint	Dry upland forests and low open woods along streams[6]	Likely
Muhly (*Muhlenbergia tenuiflora*)	Deciduous woodlands[5]	Likely
Muhly (*Muhlenbergia*	Dry woods and barrens[3]	Likely

Common Name	Habitat Requirements	Suitable Habitat Present
glabrifloris)		
Naiad	Clear lakes and ponds[x]	Likely
Naked-stem sunflower	Open areas with sandy soil[5]	Likely
Nuttall's mock bishop's-weed	Wetlands and wet areas[7]	Likely
Oldenlandia	Wetlands and wet forests[7]	Yes Recorded in a TVA Zone 6 parcel
Ovate catchfly	Open oak woods[3]	Likely
Possum-haw viburnum	Barrens, depressions, willow oak forest[3]	Likely
Prairie redroot	Usually calcareous soils, often limestone outcrops[5]	Likely
Price's potato-bean	Opening in rich woods[3]	Likely
Purple milkweed	Barrens[3]	Likely
River bulrush	Marshes[3]	Yes Recorded in a TVA Zone 4 parcel
Rough pennyroyal	Dry prairies and pastures[8]	Limited
Rough rattlesnake-root	Barrens and roadsides[3]	Yes Recorded in a TVA Zone 3 parcel
Screwstem	Wetlands[7]	Likely
Sedge (*Carex lacustris*)	Alluvial woods[3]	Likely
Sedge (*Carex reniformis*)	Rich bottomland woods[3]	Yes Recorded in a TVA Zone 4 parcel
Short-beak arrowhead	Swamps and floodplains[3]	Yes Recorded in a TVA Zone 4 parcel
Short's rock-cress	Wooded bluffs and floodplains[3]	Likely
Slender blazing-star	Barrens[3]	Likely
Small sundrops	Damp depressions[5]	Likely
Smaller mud-plantain	Mud flats[3]	Yes Recorded in a TVA Zone 4 parcel
Southern bog clubmoss	Moss, bogs, lakeshores, marshes, ditches, borrow pits[2]	Likely
Southern morning-glory	Dry piney woods[3]	Likely
Spreading false-foxglove	Limestone bluffs shaded by oaks. Oak root parasite.[4]	Likely
Swamp wedgescale	Wetlands[7]	Yes Recorded in a TVA Zone 7 parcel
Sweetscent ladies'-tresses	Swamps, marshes, prairies, riverbanks, ditches[2]	Yes Recorded in a TVA Zone 4 parcel
Sweet-scented indian-plantain	Alluvial woods, moist slopes[3]	Yes Recorded in a TVA Zone 4 parcel
Tower-mustard	Barrens and open floodplains[3]	Likely
Trepocarpus	Wetlands[7]	Yes Recorded in a TVA

Common Name	Habitat Requirements	Suitable Habitat Present
		Zone 4 parcel
Turk's cap lily	Moist meadows woods and coves[4]	Yes Recorded in a TVA Zone 4 parcel
Virginia rose	Limestone barrens and swamps[3]	Likely
Walter's barnyard grass	Bottomlands and marshes[3]	Yes Recorded in a TVA Zone 4 parcel
Water-purslane	Swamps[3]	Likely
Wedge-leaf whitlow-grass	Barrens and glades[3]	Likely
Western false gromwell	Glades[3]	Likely
Western hairy rock-cress	Glades and limestone bluffs[3]	Likely
White turtlehead	Wetlands[7]	Likely
Yellow trout-lily	Mesic woods and slopes[3]	Likely

[1] Source: Lady Bird Johnson Wildflower Center 2013
[2] Source: Flora of North America 1993
[3] Source: TDEC 2014
[4] Source: NatureServe 2016
[5] Source: Hilty 2015
[6] Source: University of Illinois 2016
[7] Source: USDA NRCS 2016b
[8] Source: Kansas Wildflowers & Grasses 2016

2.2.5.2 Terrestrial Wildlife

Reviews of the TVA Natural Heritage database indicated that there are 11 federally listed terrestrial species (five endangered, two threatened, one that is recovered, delisted, and being monitored, two partial status listing, and one species of concern), and 37 additional state-listed species with no federal status in the counties surrounding Kentucky Reservoir (see Table 2-8). Within 3 miles of the reservoir, 36 state-listed species have been recorded, 8 of which are also federally-listed species. These species and their habitat requirements are described in Table 2-10. Thirteen of these species have been recorded on a TVA parcels.

Table 2-10. Habitat Requirements for Terrestrial Species of Conservation Concern within 3 Miles of Kentucky Reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
Amphibians		
Bird-voiced treefrog	Bottoms, sloughs and swamps along rivers and large creeks[1]	Yes Recorded on a Zone 3 parcel
Four-toed salamander	Sphagnum/moss bogs, shallow wetlands, vernal pools, headwater streams[1]	Yes Recorded on a Zone 3 parcel
Green treefrog	Forested areas and swamps[1]	Yes Recorded on a Zone 4 parcel
Hellbender	Creeks and Rivers[2]	Likely

Common Name	Habitat Requirements	Suitable Habitat Present
Northern crawfish frog	Prairies, low meadows, pastures. Occasionally found in floodplain. Breed in waterholes and ditches[2]	Little suitable habitat
Three-lined salamander	Beneath logs/leaves in flooded forests along wet ditches or in seepage area around springs[1]	Yes Recorded on a Zone 3 parcel
Birds		
Anhinga	Swamps, lakes, and sluggish streams at low elevations[3]	Likely, however records are historic Recorded on a Zone 4 parcel
Bachman's sparrow	Dry open mature pine forest with grass understory, found clear cuts, fallow fields[2]	Limited amount of evergreen forest
Bald eagle	Forested areas near open water[2]. In Tennessee, overwintering on reservoirs and large rivers[1]	Yes Recorded on TVA Zone 4 and 7 parcels
Bewick's wren	Shrubby areas, open woodlands near rivers and streams. Rare east of the Mississippi River.	Yes Recorded on a Zone 3 parcel
Brown creeper	Coniferous and mixed forests, often in bottomland hardwood forests in winter.[1]	Limited amount of evergreen or mixed forest
Common barn-owl	Nesting: cliffs, hollow trees, buildings, open forests; foraging: dense grass fields including marshes[2]	Likely
Great egret	Wetlands and shallow water[2]	Yes Recorded on a Zone 4 parcel
Lark sparrow	Open habitats with scattered bushes and trees, prairie, cultivated areas, fields with bushy borders; ground nester.[3]	Limited suitable habitat
Little blue heron	Bodies of calm shallow water; colonial nester[3]	Likely
Piping plover	Open sandy beaches, occasionally mud flats[1]	Likely
Swainson's warbler	Mature, rich, damp, deciduous floodplain and swamp forests.[3]	Likely
Yellow-crowned night-heron	Wetlands[1]	Yes Recorded on a Zone 4 parcel
Insects		
American burying beetle	Forests, fields, hedgerows[2]	Likely
Margaret's river cruiser	Small streams to large rivers, usually mountain streams[2]	Likely

Common Name	Habitat Requirements	Suitable Habitat Present
Mammals		
Allegheny woodrat	Rocky outcrops, cliffs. Usually at higher elevations[2]	Limited suitable habitat
Evening bat	In spring and summer tree cavities are utilized, occasionally manmade structures. Caves almost never utilized. Winter habitat unknown.[1]	Yes Recorded on a Zone 3 parcel
Gray bat	Caves[2]	Yes. One cave within TVA Parcels. Zones 4 and 7
Indiana bat	In winter, hibernacula are found in caves. During summer, roosts are found in wooded or semi wooded areas that have suitable trees with loose bark.[2]	Yes Recorded on a Zone 4 parcel
Northern long-eared bat	In winter, hibernacula are found in caves. During summer, roosts are found in wooded or semi wooded areas that have suitable trees with loose bark.[2]	Likely
Meadow jumping mouse	Moist lowlands, wetlands[2]	Likely
Pygmy shrew	Grassy opening, coniferous and deciduous forests, floodplains and bogs[1]	Likely
Southeastern bat	Usually roosts in buildings and hollow trees, occasionally uses caves and other man-made structures. Maternity colonies found in caves. Associated with water.[1]	Likely
Southeastern shrew	Various habitats, appears to prefer moist-wet areas[2]	Likely
Reptiles		
Alligator snapping turtle	Slow moving, deep water of rivers, sloughs, oxbows, swamps, and lakes; middle and west Tennessee; obscure.[3]	Yes Recorded on a Zone 3 parcel
Coal skink	Humid wooded areas with abundant leaf litter and loose rocks; vicinity of springs, swamps, and bogs; spotty distribution.[3]	Likely
Eastern ribbon snake	Semi-aquatic, rarely found far from water. Found along grassy edges of wet areas.	Likely
Midland smooth softshell	Large rivers with sandy/muddy bottoms. Occasionally found in lakes.[1]	Yes Recorded on a Zone 6 parcel
Northern pine snake	Pine or pine/oak woodland on sandy soils[2].	Likely Recorded on TVA parcels Zones 4 and 6
Southeastern five-lined skink	Woodland habitat, usually dry areas[1]	Likely
Western pigmy rattlesnake	Usually near water in river floodplains,	Likely

Common Name	Habitat Requirements	Suitable Habitat Present
	swamps, marshes, and wet prairies; occasionally drier wooded uplands.[3] Occasionally found in rocky uplands, pine woods and glades[1]	Recorded on TVA Zones 4 and 7 parcels

[1] Source: TWRA 2016
[2] Source: NatureServe 2016
[3] Source: TDEC 2014

2.2.5.2.1 Amphibians

There are six species of listed amphibians within 3 miles of the reservoir (Table 2-8). Two of these species (four-toed salamander, the three-lined salamander, and bird-voiced treefrog) have been recorded in TVA parcels that would be allocated to Zone 3 (Sensitive Resource Management) Green treefrog has been recorded on a TVA parcel that would be allocated to Zone 4 (Natural Resource Conservation). Suitable habitat for hellbender is likely located within TVA parcels. The northern crawfish frog has limited suitable habitat within the TVA parcels.

2.2.5.2.2 Birds

There are 12 species of listed birds within 3 miles of Kentucky Reservoir. Five species, the anhinga, bald eagle, Bewick's wren, great egret, and yellow-crowned night heron are known to occur within TVA parcels, however the record of the anhinga is historic. Of the remaining eight species, five have likely suitable habitat within the TVA parcels.

Bald eagles have been observed foraging over Kentucky Reservoir and documented nesting in larger trees along the reservoir. Bald eagles have been observed on TVA parcels that would be allocated to Zone 4 (Natural Resource Conservation) and Zone 7 (Shoreline Access).

Bewick's wrens have been documented on a Zone 3 (Sensitive Resource Management) parcel at Kentucky Reservoir and suitable open woodland and shrubby habitat is present on additional TVA parcels.

Wetland habitats on TVA parcels provide habitat for bird species, including great egrets and yellow-crowned night herons. Both species have been documented on a Zone 4 (Natural Resource Conservation) parcel. Little blue herons utilize similar habitats, but have not been documented on any TVA parcels at Kentucky Reservoir. There is suitable wetland habitat present for each of these species. Piping plovers may utilize the open mudflats available at

times in shallow portions of the reservoir. However, no piping plovers have been recorded on TVA properties to date.

Habitat on TVA parcels is more limited for Bachman's sparrows, brown creepers, and lark sparrows. Brown creepers may use the more abundant deciduous bottomland hardward forests during winter months, but coniferous forests have become more limited due to southern pine beetles.

Suitable habitat exists for barn owls and Swainson's warbler, but neither of these species have been documented on TVA parcels to date.

2.2.5.2.3 Insects

Of the two species known to occur within 3 miles of the reservoir, neither the American burying beetle nor Margaret's river cruiser is known to occur within any TVA parcels, however suitable habitat for both species is present. American burying beetles utilize forests, fields, hedgerows. Margaret's river cruiser is found along small streams to large rivers, typically mountain streams in high quality forests. This type of habitat is limited on TVA parcels and it is unlikely that this species is present.

2.2.5.2.4 Mammals

Within 3 miles of Kentucky Reservoir, there are eight species of listed mammals, four bat species and four rodent species. All of the bat species have been recorded on TVA parcels with the exception of the southeastern bat. There are 36 caves within 3 miles of the reservoir, three of which are known to have gray bats. A cave located within a parcel that would be allocated under the draft RLMP to Zone 7 (Shoreline Access) contains a maternity roost for gray bats and is listed as a Priority 2 cave in the Gray Bat Recovery Plan. There is foraging and summer roosting habitat for all five bat species within the TVA parcels. Indiana bats have been tracked to a spring/summer roost on a TVA parcel that would be allocated to Zone 4 (Natural Resource Conservation). Records of northern long eared bats occur on the shoreline of Kentucky Reservoir, though not on TVA parcels. These records include documentation of pregnant and lactating female northern long-eared bats. Additional summer habitat for northern long-eared is known from Trigg, Lyon and Marshall counties, Kentucky.

There are no known records for any of the rodent species within the parcels, however suitable habitat is present for all but the Allegheny woodrat.

2.2.5.2.5 Reptiles

Seven species of listed reptiles have been reported within 3 miles of the reservoir. Four of these species (the western pygmy rattlesnake, northern pine snake, midland smooth softshell, and the alligator snapping turtle) have been recorded within TVA parcels. The remaining four species have not been recorded within TVA parcels, however suitable habitat is present.

Alligator snapping turtles utilize slow moving, deep water of rivers, sloughs, oxbows, swamps, and lakes. Suitable habitat is present for this species, and it has been recorded on a Zone 3 (Sensitive Resource Management) parcel. Midland smooth softshell turtles utilize large rivers with sandy/muddy bottoms and are occasionally found in lakes. This species has been recorded on a Zone 6 (Developed Recreation) parcel and suitable habitat is present on other TVA parcels.

The western pine snake was recorded on parcels that would be allocated to Zone 4 (Natural Resource Conservation) and Zone 7 (Shoreline Access). Suitable habitat exists on these and other parcels.

Coal skinks utilize humid wooded areas with abundant leaf litter and loose rocks near springs and wetlands. Similarly eastern ribbon snakes and western pigmy rattlesnakes are rarely found far from water in grassy edges of wet areas, swamps, and marshes. There is suitable habitat present for all of these species, but only the pigmy rattlesnake has been recorded on TVA parcels to date. Western pigmy rattlesnakes have been recorded on TVA Zones 4 (Natural Resource Conservation) and Zone 7 (Shoreline Access) parcels.

Northern pine snakes utilize pine or pine/oak woodlands with sandy soils. Habitat is present for this species and it has been recorded on TVA parcels allocated for Zones 4 (Natural Resource Conservation) and Zone 6 (Developed Recreation).

Southeastern five-lined skinks are found in dry woodland habitats. Suitable habitat exists for this species, but it has not been recorded on TVA parcels.

For information on terrestrial wildlife and potential impacts of the draft RLMP, see Volume I, Section 3.5.4.

2.2.5.3 Aquatic Species

In the 15 counties surrounding Kentucky Reservoir, there are 17 federally listed aquatic animal species and 61 state-listed species (Table 2-8). Within 10 miles of the reservoir, there are 16

federally listed species and an additional 62 state-listed species (Table 2-11). There are records of 40 listed species within the reservoir, however only one federally listed and two state-listed occurrence records are located on TVA parcels. Both the slenderhead darter and the redspotted sunfish are located on parcels that would be allocated to Zone 7 (Shoreline Access). These records are from 1960 and 1954, respectively. The slabside pearlymussel was located within a parcel that would be allocated to Zone 3 (Sensitive Resource Management).

Table 2-11. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Kentucky Reservoir

Common Name	Habitat Requirement	Suitable Habitat Present
Fish		
Alabama shad[3]	Anadromous fish that lives in saltwater and migrates to medium/large coastal rivers to spawn.[1]	Unlikely
Alligator gar[3]	Sluggish pools of large rivers, oxbows, swamps, and backwaters; west Tennessee.[2]	Likely
American brook lamprey[3]	Gravel/sand riffles and runs of creeks-rivers with strong flow[1]	Unlikely
Ashy darter	Medium rivers, slow moving pools with gravel substrates	Unlikely
Bandfin darter	Sand and gravel pools at headwaters, creeks, and small rivers[1]	Unlikely
Black buffalo	Pools and backwaters of small to large rivers, reservoirs and lakes[1]	Likely
Blacknose dace	Cool gravel/rocky headwater pools and slow runs[1]	Unlikely
Blotched chub[3]	Shallow water of medium streams to small rivers with gravel, rubble, or bedrock substrate.	Unlikely
Blotchside logperch[3]	Riffles and gravel runs of clear, small to medium rivers	Unlikely
Blue sucker[3]	Large rivers and tributaries. Found in channels and flowing pools. Located in some impoundments	Possible
Central mudminnow	Vegetated streams, sloughs, bogs, lakes and overflow areas.[1]	Likely
Chain pickerel[3]	Vegetated lakes, swamps, backwaters, quiet pools of creeks and small-medium rivers[1]	Likely
Chestnut lamprey[3]	Medium to large river and large reservoirs.[1]	Likely
Coppercheek darter[3]	Primarily in deep riffles, runs, and flowing pools; Duck and Buffalo River watersheds[2]	Likely
Cypress darter	Slow moving water, usually in vegetation over mud. Common in soft bottomed lowland lakes.[1]	Likely
Eastern sand darter	Sandy area within slow moving small creeks to large river and lake shores.[1]	Likely
Fantail darter	Riffles with gravel/rubble in creeks to medium rivers.[1]	Somewhat likely

Common Name	Habitat Requirement	Suitable Habitat Present
Firebelly darter	Sand/gravel bottom pools of headwaters, creeks, small rivers. Most common in swift currents.[1]	Unlikely
Flame chub	Springs and spring fed streams	Unlikely
Gilt darter[3]	Small-medium rivers with clean water and strong flow.[1]	Somewhat likely
Golden darter	Medium to large rivers in shallow riffle areas of pea gravel; Tennessee River system.[2]	Likely. Rare, not state listed
Goldstripe darter	Clay/sand bottomed runs and pools of vegetated spring-fed headwaters and creeks.[1]	Unlikely
Highfin carpsucker[3]	Pools and backwaters of creeks and rivers with gravel or sandy bottoms.	Likely
Lake sturgeon	Bottoms of large clean freshwater rivers and lakes	Somewhat likely
Lollipop darter	Small to medium sized, gravelly, cool, spring-fed streams; Shoal Creek watershed.[2]	Unlikely
Pygmy madtom	Medium to large rivers with moderate to strong current over gravel substrates; Tennessee River watershed.[2]	Likely
Redline darter	Riffles of clear creeks and small to medium rivers[1]	Somewhat likely
Redspotted sunfish	Swamps, sloughs, bottomland lakes, pools in creeks and small-medium rivers.[1]	Likely Recorded on a TVA Zone 7 parcel
Rosefin shiner	Rocky pools and runs of headwaters, creeks, and small rivers.[1]	Unlikely
Rosyside dace	Upland tributaries of Little Tennessee River; east Tennessee.[2] Small clear streams.[1]	Unlikely
Saddled madtom	Rocky riffles, runs, and flowing pools of clear creeks and small rivers; Duck River system and nearby tributaries of the Tennessee River.[2]	Unlikely
Scaly sand darter[3]	Small to medium rivers with sandy substrate; Hatchie and Buffalo rivers.[2]	Somewhat likely
Silver lamprey[3]	Lakes, reservoirs, and large rivers; lower Cumberland, lower Tennessee, and probably Mississippi river watersheds.[2]	Likely
Slenderhead darter[3]	Small-large rivers with moderate gradient in shoal areas with moderate-swift currents; portions of Tennessee and Cumberland river watersheds.[2]	Likely Recorded on a TVA Zone 7 parcel
Southern brook lamprey	Creeks and small rivers in gravel/sand riffles and runs.[1]	Somewhat likely
Southern cavefish	Aquatic cave obligate; cave streams, karst waters, and water supply wells; reported from all karst regions excluding River Valley and Blue Ridge[2]	Likely. Known from Baugus cave and an unnamed

Common Name	Habitat Requirement	Suitable Habitat Present
		cave near Jeannette
Spotfin shiner	Large creeks-small rivers with permanent flow, usually in riffles and raceways.[1]	Likely
Steelcolor shiner	Runs, pools, and backwaters of large creeks to large rivers.[1]	Likely
Stripetail darter	Pools of shallow headwater, creeks, small rivers with rocky substrate.[1]	Unlikely
Tuscumbia darter	Ponded spring-fed habitats of valley floor springs; lower Tennessee River; probably extirpated from Tennessee.[2]	Unlikely
Gastropod		
Armored rocksnail[3]	Partially buried logs, gravel, and preferably submerged rock outcrops; lower Cumberland River and larger tributaries; Obey River[2]	Likely. Rare not state-listed
Helmet rocksnail	Rocky substrates in riffle systems; bedrock in flowing water below main section of riffles; Duck River (TN River system).	Likely Rare not state-listed
Muddy rocksnail[3]	Formerly occurred in portions of lower Cumberland and lower Tennessee systems; may be limited to dam tailwaters currently.	Likely. Rare not state-listed
Ornate rocksnail[3]	Large rivers, does not readily adapt to reservoirs	Somewhat likely
Rugged hornsnail[3]	Flowing water on gravel/cobble/boulder substrate. Small-large rivers.[1]	Likely
Rugose rocksnail	Probably in the vicinity of riffles in medium rivers[1]	Likely
Shortspire hornsnail[3]	Freshwater[1]	Likely
Varicose rocksnail[3]	Rocky shoals and riffle son medium-big rivers with moderate current[1]	Likely
Mussel		
Clubshell[3]	Small/med-sized rivers and streams; deeply buried in sand/fine gravel or in clean, coarse sand/gravel runs; lower Cumberland and Tennessee rivers.[2]	Likely
Cracking pearlymussel[3]	Creeks to large rivers. In fast currents it is found in sand/grave/cobble substrate. In slow current, mud/sand substrates.[1]	Likely
Fanshell[3]	Medium to large streams, sometimes found in rivers with gravel substrate and strong current.[1]	Likely
Fat pocketbook	Sand/mud/fine gravel substrate in medium-large rivers.[1]	Likely
Flat floater	Sand/mud substrates in lakes and sloughs. In the sluggish portions of streams. Backwaters, oxbows, sloughs in medium creeks to large river backwaters.[1]	Likely
Hickorynut[3]	Sand/gravel substrate in deep water[1]	Likely

Common Name	Habitat Requirement	Suitable Habitat Present
Long-solid (*Fusconaia subrotunda*) [3]	Medium to large rivers with strong currents[1]	Likely
Long-solid (*Fusconaia subrotunda subrotunda*)	Medium to large rivers with strong currents[1]	Likely
Mucket[3]	Large creeks and rivers of riffles shoals and runs with strong currents. [1]	Likely
Ohio pigtoe[3]	Medium to large rivers. In reservoirs, usually found in tailwaters.[1]	Likely
Orange-foot pimpleback[3]	Riffles and shoals in medium to large rivers	Likely
Painted creekshell	Mixed sand and gravel with good current in less than 3 feet of water[1]	Likely
Pink heelsplitter	A variety of substrates in low to swift currents. Can adapt to lake habitats.[1]	Somewhat likely
Pink mucket[3]	Large river species associated with swift currents. May be able to reproduce in impoundments with flowing water.[1]	Likely
Pink papershell	Rivers in shallow water with slow currents and sand/gravel/mud substrate.[1]	Likely
Pistolgrip	Large rivers with gravel/rocky substrates. Adaptable to a variety of conditions.[1]	Likely
Pocketbook[3]	Generalized habitat, adapts to both deep impoundments and shallow rivers.[1]	Likely
Purple lilliput	Small-medium sized rivers & large creeks, in mud, sand, and gravel substrates; Tennessee and Cumberland river systems in headwater areas.[2]	Unlikely
Pyramid pigtoe[3]	Rivers with strong current and firm sand/gravel substrates; Tennessee and Cumberland river systems including KY Reservoir.[2]	Likely
Rabbitsfoot[3]	Large rivers in sand and gravel; Tennessee and Cumberland systems.[2]	Likely
Ring pink[3]	Gravel and sandbars of large rivers[1]	Likely
Rock pocketbook	Mud and sand bottom pools in medium-large rivers in standing or slow flowing water.[1]	Likely
Rough pigtoe[3]	Medium to large rivers in sand/gravel/cobble shoals. Occasionally found in flats and muddy sand[1]	Likely
Salamander mussel	In sand or silt under large, flat stones in areas of swift current; occurred historically in E. Fork Stones River; 2005 observed in lower Duck River.[2]	Somewhat likely
Sheepnose[3]	Generally found in deep water mud/sand/gravel bottoms in large rivers with swift currents. [1]	Likely
Slabside pearlymussel[3]	Large creeks to medium rivers, in riffles/shoals of sand, fine gravel, and cobble substrates with medium current; Tennessee River	Likely Recorded on a TVA Zone

Common Name	Habitat Requirement	Suitable Habitat Present
	watershed.[2]	3 parcel
Smooth rabbitsfoot[3]	Small to medium rivers with moderate to swift current	Somewhat likely
Spectaclecase[3]	In shelters areas of large rivers.[1]	Likely
Wartyback[3]	Medium to large rivers in 15 to 18 ft water on sand/mud substrate.[1]	Likely
White wartyback[3]	Presumed to inhabit shoals and riffles in large rivers; Tennessee and Cumberland river systems. Very rare and possibly extirpated in Tennessee.[2]	Somewhat Likely

[1] Source: NatureServe 2016
[2] Source: TDEC 2014
[3] Records within the Reservoir

For information on aquatic species and potential impacts of the draft RLMP, see Volume I, Section 3.6.

2.2.6 Water Quality

TVA has improved tailwater water quality below many of its hydroelectric facilities. This has been accomplished by the establishment of the Reservoir Releases Improvement Program, which was begun officially in 1991 when the TVA Board of Directors approved a five-year plan to improve water releases from 16 dams by maintaining minimum flows and reaeration of dam discharges. Implementing minimum flows was accomplished via turbine pulses, and dissolved oxygen levels increased in a variety of ways (e.g., turbine venting, oxygen injection, and weir dams). These techniques helped to mimic more natural riverine conditions in TVA tailwaters. The Reservoir Releases Improvement Program included daily scheduling at the Kentucky Reservoir to meet minimum flows. Sufficient water, reservoir storage, and operational flexibility exist at this reservoir to maintain flows by appropriately scheduling normal releases. The cost of this approach is minimal, generally involving the incremental value of power at different hours or days.

Kentucky Reservoir is large with a length of 184 miles, an average hydraulic residence time of 19 days, and an average depth of 17.7 feet. It is categorized by TVA as a storage reservoir with multi-purpose use, including power generation, flood control, and navigation.

The most recent ratings for dissolved oxygen, chlorophyll, and sediment for Kentucky Reservoir from TVA's Reservoir Ecological Health Ratings program are presented in Table 2-11. As is true

for several reservoirs, dissolved oxygen has been rated fair at the forebay. A fair rating has also been found for the mid-reservoir while a poor rating has been identified at the Big Sandy embayment. The Big Sandy embayment is relatively small area that has been listed by TDEC as impaired in part due to low dissolved oxygen (TDEC 2016). TVA has found dissolved oxygen conditions to be generally good, but temporally variable as a result of flow conditions through the reservoir.

Chlorophyll ratings at Kentucky Reservoir are similar to the dissolved oxygen ratings, with high concentrations and a poor rating during summer at the forebay and Big Sandy embayment. At the mid-reservoir location the rating has varied between a fair and good.

Sediment quality has generally been rated as good in Kentucky Reservoir. In 1999 and 2001, a fair rating was determined at the Big Sandy embayment due to elevated concentrations of arsenic. Low levels of polychlorinated biphenyls have been detected in samples from each location, and arsenic was slightly elevated in the Big Sandy embayment sample.

Table 2-12. Ecological Health Indicators at Kentucky Reservoir — 2011

Monitoring location	Dissolved Oxygen	Chlorophyll	Sediment
Forebay	Fair	Poor	Fair
Mid-reservoir	Fair	Fair	Fair
Big Sandy embayment	Poor	Poor	Fair

Source: TVA 2016b

While water supply intakes and waste water discharges are regulated by the states under the National Pollutant Discharge Elimination System, TVA permits the actual intake and outfall structures under Section 26a of the TVA Act. The most recent state permit/water withdrawal registration data for water supply withdrawals and waste water discharges directly from or to the reservoirs is provided in Table 2-13. This information does not include withdrawals or discharges in the watersheds.

Table 2-13. Direct Reservoir Average Daily Water Supply Withdrawals and Wastewater Discharges — 2016

2010 Water Withdrawal Volume (MGD)			2010 Wastewater Discharge Volume (MGD)		
Municipal	**Industrial**	**Thermo-electric**	**Municipal**	**Industrial**	**Thermo-electric**
5.93	70.87	1173.75	1.33	89.31	1198.00

Notes: Municipal wastewater discharge data includes 0.24 MGD in the impounded portion of Duck River.
Municipal wastewater discharge data includes 0.15 MGD in the impounded portion of Big Sandy River.
Municipal wastewater discharge data includes 0.30 MGD in the impounded portion of Beech River.
Municipal wastewater discharge data includes 0.03 MGD in the impounded portion of Jonathan Creek.

Source: Pers. Comm., Gary Springston, TVA August 2016

For information on water quality and potential impacts of the draft RLMP, see Volume I, Section 3.8.

2.2.7 Wetlands

Wetlands are transitional ecosystems between terrestrial and aquatic communities, where saturation with water is the dominant factor in determining the types of plants and animals present. Wetlands are ecologically important because of their beneficial effect on water quality, their moderation of flow regimes by retaining and gradually releasing water, their value as wildlife habitat, and as areas of botanical diversity. Wetlands exist within and adjacent to TVA reservoirs and are influenced by surface water and groundwater connections to the water levels in these reservoirs. The presence of wetlands immediately on or adjacent to TVA reservoirs is related to the land use characteristics and development status of the shoreline. Lands supporting more intense shoreline development are typically noted as having a decrease in wetland features.

Emergent wetlands typically occur in a narrow elevation zone centered on the summer pool elevation and contain water for much of the growing season. Vegetation typically includes cattail, bulrush, arrowhead, and water plantain. Scrub-shrub wetlands are typically associated with reservoir shorelines and coves and are often transition zones between emergent and forested wetlands. The vegetation can include hardwood trees less than 15 feet tall, but are dominated by shrubs such as silky dogwood, red osier dogwood, buttonbush, alder, willow, and elderberry. Forested wetlands occur on lower-lying, undisturbed areas and along tributary streams on power generation sites. These areas are dominated by flood tolerant hardwood species such as oaks, maples, and ash.

Vegetated wetlands occur with greater frequency and size along the mainstem reservoirs and tailwaters, such as Kentucky, than along the tributary reservoirs and tailwaters. This is due in part to the larger-sized watersheds of mainstem reservoirs resulting in a greater volume of water; greater predictability of the annual hydrologic regime; shoreline and drawdown zone topography (wider and flatter floodplains, riparian zones, and drawdown zones and large areas of shallow water); and larger sections of relatively still, shallow-water areas. Wetlands tend to be smaller and do not occur as frequently on tributary reservoirs because of the relatively steep drawdown zones, the rolling to steep topography of adjacent lands, shoreline disturbance caused by wave action, and the lower predictability and shorter duration of summer pool levels. Within mainstem reservoirs, wetlands occur on flats between summer and winter pool elevations, on islands, along reservoir shorelines, in dewatering areas, in floodplains, on river terraces, along connecting rivers and streams, around springs and seeps, in natural depressions, in areas dammed by beaver, in and around constructed reservoirs and ponds (diked and/or excavated), and in additional areas that are isolated from other surface waters.

The information presented in this document is derived from the National Wetland Inventory database and supplemented with previous on-the-ground surveys done by TVA, including for the SMI EIS. Field surveys were not performed for this RLMP to gather more up-to-date information regarding the types and locations of wetlands within the Kentucky Reservoir. The most abundant wetland type within the Kentucky Reservoir is forested, followed by open water and an almost equal amount of scrub-shrub and emergent wetlands (Table 2-14).

Table 2-14. Wetland Types within the Kentucky Reservoir

Wetland Type	Acres
Scrub-shrub	2,202.9
Emergent	2,213.9
Open Water	3,462.7
Forested	15,660.7
Total	**23,538.2**

Source: USFWS 2016b

Some of the wetland areas within the reservoir are present in local, state, and federally managed areas including wildlife refuges, wildlife management areas, national forests, parks, and recreation areas; and TVA-designated sites, including small wild areas, habitat protection areas, and ecological study areas (Section 2.2.11).

For information on wetlands and the potential impacts of the draft RLMP, see Volume I, Section 3.9.

2.2.8 Floodplains

The area encompassed by the RLMP extends from the lower limit of TVA's property, just below the Kentucky Dam at approximate Tennessee River mile (TRM) 20.44, upstream to TRM 206.7 at Pickwick Dam. Kentucky Dam is located at TRM 22.4. The 100-year floodplain is the area that would be inundated by the 100-year flood (base flood).

In Kentucky Reservoir, the 100-year flood elevations for the Tennessee River vary from 375.0 feet msl at the Kentucky Dam at TRM 22.4 to elevation 401.4 feet msl at TRM 206.7 just below Pickwick Dam. The 500-year flood elevations vary from 375.0 feet msl at TRM 22.4 to 403.6 feet msl at TRM 206.72.

Tabulations of the 100- and 500-year flood elevations are included in Volume I, Appendix D. For information on the potential impacts of the draft RLMP on floodplains, see Volume I, Section 3.10.

2.2.9 Air Quality

In accordance with the Clean Air Act Amendments of 1990, all counties that include parts of the Kentucky Reservoir are designated with respect to compliance, or degree of noncompliance, with the National Ambient Air Quality Standards (NAAQS). The NAAQS have been established to protect the public health and welfare with respect to six pollutants: particulate matter, sulfur dioxide, carbon monoxide, ozone, nitrogen dioxide, and lead. An area with air quality better than the NAAQS is designated as "attainment;" an area with air quality worse than the NAAQS is designated as "non-attainment." Callow, Livingston and Lyon counties in Kentucky and Benton, Decatur, Hardin, Henry, Houston, Humphreys, Perry, Stewart and Wayne counties in Tennessee are considered in attainment for all NAAQS (USEPA 2016). The Mingo Wilderness is a designated Prevention of Significant Deterioration Class I air quality area approximately 103 miles from the Kentucky Reservoir and is afforded special protection. General information about air emissions and climate change are identified in Volume I, Section 3.11.

Sources of air emissions within lands along the Kentucky Reservoir include industrial development, public works projects, developed recreation sites, motorized watercraft (motor boats, jet skis), and other vehicle traffic. Lands that would be allocated to Zone 5 (Industrial) have the greatest potential to support uses that produce higher levels of air emissions. Major

sources of air emissions within Zone 5 include industrial and light manufacturing facilities, barges, trucks and personal vehicles, and barge terminals and operations.

Air emissions generated at Kentucky Reservoir vary with type of activity/development. Currently, air emissions from uses on TVA lands on the Kentucky Reservoir are low. Future projects that have the potential to affect ambient air quality would be planned in detail to minimize air emission impacts and would comply with Clean Air Act regulations.

For information on air quality and the potential impacts of the draft RLMP, see Volume I, Section 3.11.

2.2.10 Cultural and Historic Resources

Cultural resources include prehistoric and historic archaeological sites, districts, buildings, structures, and objects, as well as locations of important historic events that lack material evidence of those events. Cultural resources that are listed, or considered eligible for listing, on the National Register of Historic Places (NRHP) are called historic properties. To be considered an historic property, a cultural resource must possess both integrity and significance. A historic property's integrity is based on its location, design, setting, materials, workmanship, feeling, and association. The significance is established when historic properties meet at least one of the following criteria: (a) are associated with important historical events or are associated with the lives of significant historic persons; (b) embody distinctive characteristics of a type, period, or method of construction; (c) represent the work of a master, or have high artistic value; or (d) have yielded or may yield information important in history or prehistory (36 Code of Federal Regulations [CFR] Part 60.4).

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effects of their proposed undertakings on historic properties and provide the Advisory Council on Historic Preservation an opportunity to comment on those effects. TVA determined that the draft RLMP is an "undertaking" as defined by the regulations under NHPA. Once an action is determined to be an undertaking, the regulations require agencies to consider whether the proposed activity has the potential to impact historic properties. If the undertaking is such an activity, then the agency must follow the following steps: (1) involve the appropriate consulting parties; (2) define the area of potential effects (APE); (3) identify historic properties in the APE; (4) evaluate possible effects of the undertaking on historic properties in the APE; and (5) resolve adverse effects. (36 CFR § 800.4 through 800.13.). An APE is defined as the "geographic area or areas within which the undertaking may directly or indirectly cause

alterations in the character or use of historic properties, if any such properties exist." (36 CFR § 800.16.). Concerning cultural resources, the APE is taken as the affected environment for purposes of this EA. TVA defined the APE to be the approximately 6,076.6-acre area where TVA is proposing in its draft RLMP (Alternative B) to change the current Zone allocations.

Section 106 of the NHPA requires federal agencies to consult with the respective State Historic Preservation Officer and Indian tribes when proposed federal actions could affect historic and cultural resources, including archaeological resources, which are also protected under the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act, in addition to the NHPA.

2.2.10.1 Archaeological Resources

The Kentucky Reservoir region has been an area of human occupation for the last 12,000 years. This includes five broad cultural periods: Paleo-Indian (>12,000-8,000 BC), Archaic (8,000-1,600 BC), Woodland (1,600 BC-AD 1,000), Mississippian (AD 1,000-1,700), and Historic (AD 1,700-present). These divisions are based on stylistic changes in artifact types and technological and cultural adaptations. Prehistoric land use and settlement patterns vary during each period, but short- and long-term habitation sites are generally located on flood plains and alluvial terraces along rivers and tributaries. Specialized campsites tend to be located on older alluvial terraces and in the uplands. The cultural history of Kentucky Reservoir was well summarized in the report of archaeological findings by Kerr (1996). The Chickasaw occupied the western Tennessee Valley with the Cherokee and Upper Creeks further east along the headwaters of the Tennessee River. The influx of European settlers occurred after 1818 under three treaties with the Chickasaw. Subsistence farming, small "landing businesses related to river transportation, and the iron industry played an important role in the development of this region. Kentucky reservoir lands saw conflict during the Civil War as the area was important for transportation. Fort Henry, Fort Donelson, and Fort Heiman were prominent fortifications in the area. The Post-Civil War economy near Kentucky Reservoir experienced more diverse industry development such as timbering, musseling, leather tanning, whiskey production, and tobacco farming, was comparatively slow, but industrialization eventually spread through the counties. Industry development continued to expand until the creation of Kentucky Reservoir when recreation and river transportation increasingly influenced the region's economy.

The earliest formal archaeological investigations in the region began long prior to the impoundment of Kentucky Reservoir and were undertaken by Constantine Rafinesque (Rafinesque 1824), Clarence B. Moore (1915) and Webb and Funkhouser (1932). These early investigations were primarily concerned with prehistoric monumental architecture, caves, and large shell midden sites. Prior to the inundation of the Kentucky Reservoir, laborers from the Works Projects Administration and the Civilian Conservation Corps conducted the first large-scale archaeological excavations in Kentucky River basin under the direction of archaeologists affiliated with the University of Kentucky. Excavations mostly focused on large shell midden sites and large mound civic/ceremonial centers. These excavations provided detailed information regarding the chronological occupation of the region. In recent decades, TVA land has been subjected to archaeological investigations in response to potential project impacts. The largest of these archaeological investigations focused on identifying easily accessible archaeological sites on 19,949 acres of Kentucky Reservoir land and 690 miles of shoreline (Kerr 1996, Kerr and Reynolds 2000). These and other past archaeological surveys of Kentucky Reservoir lands have varied in location and thoroughness due to evolving archaeological site identification standards. Not all of the lands involved in this land planning process have been surveyed. Moreover, many of the previously reported archaeological sites have not been assessed for their NRHP eligibility. Within the 6,076 acres subject to TVA's zone reallocation, these limited archaeological surveys resulted in the identification of 212 archaeological sites.

2.2.10.2 Historic Structures

The acquisition of land for Kentucky Reservoir resulted in the removal of many structures and other man-made features. The few structures that remain represent all historical periods including individual farmsteads or larger scale plantations, civic or religious sites such as churches, cemeteries or schools, and industrial sites such as mills. In addition, structures associated with the inception of TVA may have historic significance such as the Kentucky Hydroelectric Project. TVA has conducted a survey of all of the major hydroelectric facilities that TVA built and is currently in the process of nominating Kentucky Dam and its associated facilities to the NRHP.

Furthermore, many historic structures remain on adjacent non-TVA land that may be indirectly impacted by activities on TVA land.

2.2.11 Natural Areas and Ecologically Significant Sites

Natural areas include managed areas, ecologically significant sites, and Nationwide Rivers Inventory (NRI) streams. Managed areas include lands held in public ownership that are managed by an entity (e.g., TWRA, TVA, USFWS, State of Tennessee, Marshall County) to protect and maintain certain ecological and/or recreational features. A management plan or similar document defines what types of activities are compatible with the intended use of the managed area. Ecologically significant sites are tracts of privately owned land that are either recognized by resource biologists as having significant environmental resources or identified tracts on TVA lands that are ecologically significant, but not specifically managed by TVA's Natural Areas Program. Nationwide Rivers Inventory streams are free-flowing segments of rivers recognized by the National Park Service as possessing outstandingly remarkable natural or cultural values that may potentially qualify them as part of the National Wild and Scenic Rivers System.

The TVA Natural Heritage database indicates that there are 60 natural areas on or within TVA parcels along Kentucky Reservoir. The TVA Natural Areas Program manages 13 of the 60 natural areas. An additional 36 natural areas lie within 3 miles of Kentucky Reservoir. The natural areas along Kentucky Reservoir include local and state parks, USFWS, TVA, and TWRA lands. For more information on managed areas and sensitive ecological sites, see Volume I, Section 3.13 or Appendix D.

2.2.12 Aesthetics and Visual Resources

The shoreline of Kentucky Reservoir is composed of a variety of land uses including the Land Between the Lakes National Recreation Area and other recreational areas, forested areas, residential development, suburban areas, parks, farmed areas, and a relatively small amount of industrial and commercial and industrial uses primarily located in the vicinity of the dam.

The southern half of the reservoir is narrow and more characteristic of a river with a large extent of undeveloped, natural appearing vegetated shoreline. As one moves north along the reservoir, the river becomes wider and more pool-like. There is a higher level of development present but a large extent of natural-appearing shoreline still remains.

The visibility of the landscape to viewers is moderate to high, with the value increasing as one moves north along the reservoir. This is largely due to the wider river and higher number of state parks, commercial recreational developments, and other recreational areas including the Land Between the Lakes.

2.2.13 Noise

Sources of noise within lands along the Kentucky Reservoir include those associated with industrial development, developed recreation sites, and uses related to TVA project operations and various public works projects. Characteristics of noise emissions associated with common land uses are identified in Volume I.

Lands that TVA proposes to allocate to Zone 5 (Industrial) have the greatest potential to support uses that produce high levels of noise. The most common measurement of sound and environmental noise is the A-weighted decibel scale (dBA). This is a logarithmic scale that ranges from 0 dBA to about 140 dBA and approximates the range of human hearing. Common sources of noise from industrial uses include: heavy trucks; rail and barge operations; and industrial workplaces. Noise emission levels for these sources can range from 85 dBA to 100 dBA (U.S. Department of the Interior 2008) and are dependent on the distance from the noise source. Lands allocated to Zone 2 (Project Operations) and Zone 6 (Developed Recreation) also have the potential to generate noise, but typically to a lesser degree than industrial development. The primary source of noise from land that would be allocated to Zone 2 under the draft RLMP are the Kentucky Dam Reservation, including the dam and powerhouse, navigation lock and associated barge operations, access roads, boat ramp, and a commercial marina. Noise emission levels for these sources can range from 70 dBA to 100 dBA (USDOI 2008) and are also dependent on the distance from the noise source. The primary source of noise from land that would be allocated to Zone 6 would be commercial marinas and motorized watercraft (motor boats, jet skis); and road traffic. Noise emission levels for land uses allocated to this zone can range from 40 dBA (very quiet) to 90 dBA (jet ski). Noise levels for motor boats and jet skis may also exhibit short elevated bursts of noise as a result of speed of the watercraft and other operational factors.

TVA land that would be allocated under the draft RLMP to Zone 3 (Sensitive Resource Management), Zone 4 (Natural Resource Conservation) and Zone 7 (Shoreline Access) account for the majority (89 percent) of land uses at Kentucky Reservoir. Such land uses generally do not create noise emissions that would have an effect on the ambient noise environment and

reflect a general environment consisting of low noise levels. Approximately 11 percent of land along the reservoir would be allocated to zones that would support land uses with the potential for noise emissions (Zones 2, 5, and 6).

Noise from land uses varies with the type of development and will attenuate with distance from the source and as such, the noise level around the reservoir is relatively low. Any future projects on parcels that have the potential to affect noise emissions would be planned in detail and may be expected to consist of both water-dependent facilities and other common actions as well as new developments as allowed per each land use zone.

For information on these resources and the potential impacts of the draft RLMP, see Volume I, Section 3.14.

2.2.14 Socioeconomics and Environmental Justice

2.2.14.1 Population and Economy

The population of the Kentucky Lake Reservoir area, which consists of 15 counties, is described in Table 2-15. Calloway County has the highest population with 38,343 which represents an increase of 3.1 percent since 2015. The remaining county populations range from 7,929 in Perry County to 28,015 in Henderson County. Only three counties; Calloway, Henderson, and Perry, had positive growth rates from 2010 to 2015. All other counties within the area decreased in total population size during the same time period; however projections through 2020 indicate that all counties will have positive population growth rates. The counties in the Kentucky Reservoir area are decidedly rural in distribution of population. All counties within the area exceed the states rural population percentage. Calloway County is the only county with less than 50 percent of the total population being considered rural while the remaining counties all have greater than a 60 percent rural population. Five counties are considered to be completely rural.

Table 2-15. Population and Percent Growth – Kentucky Reservoir

County	Population (2020 - Projection)	Population (2015 - Estimate)	Population (2014 - Estimate)	Population (2010)	Projected Growth (2015-2020)	Percent Change (2010-2015)	Percent Change (2010-2014)	Percent Rural (2010)
Livingston	9,438	9,316	9,443	9,519	1.3%	-2.1%	-0.8%	95.4%
Lyon	8,523	8,306	8,415	8,314	2.6%	-0.1%	1.2%	100.0%
Calloway	40,411	38,343	37,981	37,191	5.4%	3.1%	2.1%	48.7%
Trigg	16,244	14,233	14,277	14,339	14.1%	-0.7%	-0.4%	79.4%
Humphreys	20,000	18,135	18,322	18,538	10.3%	-2.2%	-1.2%	82.5%
Benton	20,542	16,129	16,345	16,489	27.4%	-2.2%	-0.9%	78.5%
Decatur	14,577	11,660	11,675	11,757	25.0%	-0.8%	-0.7%	100.0%
Hardin	29,604	25,756	25,969	26,026	14.9%	-1.0%	-0.2%	67.9%
Wayne	18,046	16,748	16,967	17,021	7.8%	-1.6%	-0.3%	100.0%
Henry	38,947	32,147	32,279	32,330	21.1%	-0.6%	-0.2%	66.9%
Henderson	33,034	28,015	27,963	27,769	17.9%	0.9%	0.7%	76.4%
Perry	9,260	7,929	7,851	7,915	16.8%	0.2%	-0.8%	100.0%
Stewart	15,659	13,259	13,311	13,324	18.1%	-0.5%	-0.1%	100.0%
Houston	10,563	8,149	8,356	8,426	29.6%	-3.3%	-0.8%	100.0%
Carroll	35,753	27,910	28,511	28,522	28.1%	-2.1%	0.0%	83.1%
Tennessee	7,195,375	6,600,299	6,451,365	6,346,105	8.3%	3.9%	1.6%	33.6%
Kentucky	4,672,754	4,425,092	4,383,272	4,339,367	5.3%	1.9%	1.0%	41.6%

Sources: USCB 2015 and USCB 2010a

As presented in Table 2-16, from 2010 to 2014, an average of 5.9 percent of the population over the age of 16 was unemployed throughout the area counties. The states of Tennessee and Kentucky during that same period had an unemployment rate of 6 percent. The largest sectors for civilian employment in Kentucky, Tennessee, and the majority of the counties is Management, Business Science, and Arts, as well as Sales and Office. Median household incomes range from $31,225 in Wayne County, Tennessee to 45,303 in Trigg County, Kentucky. Lyon County and Trigg County are only counties within the area that have higher median household incomes than the states of Tennessee and Kentucky.

2.2.14.2 Environmental Justice

EO 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” formally requires federal agencies to incorporate Environmental Justice as part of NEPA. Specifically, it directs them to address, as appropriate, any disproportionately high and adverse human health or environmental effects of their actions, programs, or policies on minority and low-income. Although TVA is not one of the agencies subject to this order, TVA routinely considers Environmental Justice impacts as part of the project decision-making process.

The minority population in the Kentucky Lake Reservoir area ranges from 3.6 percent for Livingston County to 15.0 percent for Carroll County (Table 2-17). All of the counties within the area contain a much smaller minority population than their respective states. From 2010 to 2014, an average of 19.6 percent of the population within the area was below the poverty level, whereas only 17.8 percent and 19 percent of the population were below the poverty level in Tennessee and Kentucky, respectively.

For information on socioeconomics and the potential impacts of the draft RLMP, see Volume I, Section 3.15 of the EIS.

Table 2-16. Employment and Income, 2010-2014 – Kentucky Reservoir

Employment and Income (2010 to 2014)	Civilian Employed Population 16 Years and Over	Management and Business Science and Arts	Service Occupations	Sales and Office	Natural Resources, Construction, and Maintenance	Production, Transportation and Material Moving	Percent of Population > 16 years Unemployed	Median Household Income
Livingston	3,776	20.3%	19.7%	19.3%	22.1%	18.6%	4.2%	$40,580
Lyon	2,721	25%	22%	25%	10%	17%	3%	$43,715
Calloway	16,855	33%	18%	25%	9%	14%	6%	$38,589
Trigg	5,461	34%	13%	24%	8%	21%	4%	$45,303
Humphreys	7,227	27%	16%	19%	15%	22%	6%	$41,152
Benton	6,068	23%	20%	21%	13%	23%	8%	$34,087
Decatur	4,569	30%	20%	19%	12%	20%	6%	$37,219
Hardin	9,216	24%	18%	23%	13%	21%	9%	$34,084
Wayne	5,662	24%	19%	24%	16%	19%	7%	$31,225
Henry	12,368	26%	17%	25%	11%	21%	7%	$38,694
Henderson	11,119	27%	15%	23%	12%	24%	6%	$38,696
Perry	2,764	25%	25%	15%	16%	18%	6%	$31,750
Stewart	4,863	32%	17%	20%	15%	16%	7%	$41,089
Houston	3,063	21%	16%	19%	22%	23%	4%	$38,637
Carroll	10,984	30%	18%	22%	9%	9%	6%	$36,168
Tennessee	2,835,895	34%	17%	25%	9%	15%	6%	$44,621
Kentucky	1,870,879	33%	17%	24%	10%	17%	6%	$43,342

Table 2-17. Minority Population and Poverty, 2010-2014– Kentucky Reservoir

County	Total Population	White Alone*	Black or African American Alone*	American Indian and Alaska Native Alone*	Asian Alone*	Native Hawaiian and Other Pacific Islander Alone*	Two or More Races	Hispanic or Latino†	Percent Minority	Percent of Population Below Poverty Level
Livingston	9,443	9,235	29	18	35	0	121	136	3.6%	15.4%
Lyon	8,415	7,749	543	0	31	0	80	70	8.5%	13.9%
Calloway	37,981	34,755	1,474	120	800	9	683	942	10.6%	21.3%
Trigg	14,277	12,819	1,172	0	80	0	206	213	11.7%	15.5%
Humphreys	18,322	17,449	711	20	28	5	61	333	6.3%	16.4%
Benton	16,345	15,603	581	28	51	0	65	330	6.5%	21.8%
Decatur	11,675	11,002	335	2	28	5	179	335	7.5%	21.8%
Hardin	25,969	21,140	1,160	86	100	16	432	236	7.9%	22.2%
Wayne	16,967	15,633	1,041	36	40	0	141	292	9.0%	21.3%
Henry	32,279	28,883	2,774	83	24	0	489	653	12.5%	19.8%
Henderson	27,963	24,923	2,154	9	25	20	232	592	12.1%	20.7%
Perry	7,851	7,474	198	23	0	0	156	152	6.7%	23.6%
Stewart	13,311	12,504	257	164	139	0	162	297	7.5%	19.1%
Houston	8,356	7,911	167	16	14	0	231	166	7.2%	21.8%
Carroll	28,511	24,726	2,851	129	52	2	566	644	15.0%	19.4%
Tennessee	6,451,365	5,029,109	1,082,001	17,656	98,441	3,256	122,662	309,828	25.4%	17.8%
Kentucky	4,383,272	3,845,535	345,035	9,000	53,448	2,109	86,627	139,636	14.5%	19.0%

*Includes persons reporting only one race
† Hispanics may be of any race, so also are included in applicable race categories.

Source: USCB 2010b

2.3 Major Features of Kentucky Reservoir

2.3.1 Natural Resource Management

Since the impoundment of Kentucky Reservoir, TVA has proactively managed the natural resources on many of the adjacent lands as well as in the reservoir fluctuation zone and embayments. Historically, TVA managed the forests on a majority of these tracts and prescribed forestry management methodologies such as timber stand improvement cuttings, timber salvage as a result of storm damage, prescribed burns (primarily in pine stands), and tree plantings. Additionally, some forest clearings were created to provide additional wildlife habitat. TVA also maintained many miles of forest roads to allow enhanced access to the public for outdoor recreation and to facilitate natural resource management objectives.

Since 1959, TVA has cooperated with the Tennessee Wildlife Resources Agency (TWRA) to manage three of the dewatering units (Big Sandy, Camden, and West Sandy) for timber protection, farmland protection and crop production, and wildlife management, especially waterfowl management. The Busseltown and Duck River dewatering units are under a management agreement with the U.S. Fish and Wildlife Service (USFWS) as part of the Tennessee National Wildlife Refuge (TNWR).

Beginning in the early 1980’s and continuing through the mid 1990’s, TVA enhanced fish and wildlife habitat along the shorelines and in the fluctuation zone of Kentucky Reservoir by planting bald cypress trees, buttonbush, and other wetland plant species. Some of these plantings were in cooperation with the TWRA and the Kentucky Department of Fish and Wildlife Resources (KDFWR). Additionally, TVA has collaborated with both TWRA and KDFWR to install fish attractors in most of the embayments of Kentucky Reservoir.

Since the early 1990s, TVA has established and maintained several hundred acres of native warm season grasses and forbs, including wildflowers, in an effort to enhance habitat for early successional wildlife species. TVA in conjunction with agricultural licensees has converted fescue hay fields to native vegetation enhancing the value of those lands to wildlife. TVA has promoted wildlife nesting boxes and platforms for species such as bluebirds, wood ducks, ospreys, and eagles. Early efforts at hacking juvenile eaglets in the Southeast were conducted at LBL.

In the early 2000’s, two resource management unit plans were developed to guide the natural resource management of two large contiguous tracts of land. The Harmon Creek (TVA 2000) and Bear Creek (TVA 2002) management unit plans outlined a scope for 25 years of natural

resource management covering such activities as timber management, wildlife habitat enhancements, enforcement, forest road maintenance, and public use management.

TVA has stabilized shoreline areas with severely eroding banks containing archaeological resources and critically eroding island areas. In addition, TVA monitors and protects sensitive species on TVA lands and within the waters of Kentucky Reservoir. Through the years, TVA has also identified and protected unique and/or sensitive lands through the natural areas program. Several of these projects were in partnership with the USFWS, KDFWR, and Kentucky Nature Preserves Commission.

TVA has increased public access along the Kentucky Reservoir shoreline for boat launching and shoreline fishing. Some of these efforts were in partnership with TWRA, KDFWR, and local governments. Boat ramps, parking lots, courtesy docks, and fishing piers have been constructed at various locations as part of this effort.

2.3.2 Tennessee National Wildlife Refuge

TNWR was established on December 28, 1945, by President Harry S. Truman, who signed Executive Order 9670, designating the area "for the use of the Department of the Interior as a refuge and wildlife management area for migratory birds and other wildlife." On December 29, 1945, TVA and the Department of the Interior entered into agreement with respect to the lands that were to be reserved and used as the wildlife refuge. TNWR's primary management objective is to provide food and protection for waterfowl. Additional information about TNWR can be found on the USFWS Web site http://www.fws.gov/tennesseerefuge/.

2.3.3 Dewatering Units

TVA operates, either alone or in partnership, six dewatering units on Kentucky Reservoir. These areas were developed as part of a long-term approach to mosquito control and were operated primarily for that purpose until the 1970s when TVA began reducing its mosquito control efforts. Additional factors in the design, development, and operation of dewatering units included providing food and habitat for wildlife, protecting bottomland hardwoods, making land available for farming, and avoiding expensive slope protection for relocated highways and railways. As TVA reduced its mosquito control activities, these other benefits began to increase in value. TVA entered into agreements with federal and state agencies for the management and cost sharing of operation and maintenance of these areas. The continued operation of the dewatering units provides environmental and economic benefits to the Region.

Of the original dewatering projects constructed on Kentucky Reservoir, the Perryville project is managed by TVA. Big Sandy, Camden, and West Sandy are managed principally by TVA but in partnership with TWRA. The Busseltown and Duck River projects are located within the TNWR and principally managed by the USFWS. In 2012, TVA decommissioned the Gumdale project, and the East Perryville project has been abandoned.

2.3.3.1 Big Sandy Dewatering Unit

The Big Sandy Dewatering Unit consists of approximately 2,942 acres of TVA land which were originally designed, constructed, and operated for mosquito control, cropland, and management of bottomland hardwoods. Included within those acres, the Big Sandy Dewatering Unit has approximately 21,000 linear feet of levees (with originally designed crest elevation of 363-feet msl); a pump house; and an estimated 8.6 miles of internal drainage ditches or canals.

The pump house at Big Sandy Dewatering Unit consists of two pumps and electric motors that provide a total original pumping capacity of 30,000 gallons per minute (gpm), two flap gates, two sluice gates, and one concrete discharge culvert.

Typically, the sluice gates are opened in mid-February to allow the impoundment to dewater down from an elevation of about 358.5 feet msl to the reservoir's winter pool elevation of around 354 feet msl. This level is maintained until the first of May when pumping begins to draw down the impoundment for a summer-time elevation of around 350 feet msl. In mid-October, pumping is discontinued and the impoundment is allowed to fill to the approximate elevation of 358.5 feet msl by around the first of December through the opening of the sluice gates and rainfall.

2.3.3.2 Busseltown Dewatering Unit

The Busseltown Dewatering Unit is considered part of the TNWR and is managed solely by the USFWS. There are four impoundments on the Busseltown Dewatering Unit totaling 300 acres. The drawdown of these impoundments generally occurs in early March. Fall filling of most of the dewatering unit occurs by rainfall. A few small impoundments are typically filled by the use of portable pumps.

2.3.3.3 Camden Dewatering Unit

The Camden Dewatering Unit consists of approximately 3,937 acres of TVA land which were originally designed, constructed, and operated for mosquito control, protection of relocated road and railway embankments, cropland, and management of bottomland hardwoods. Since 1956, it has been managed for migratory waterfowl through a cooperative agreement with TWRA. The Camden Dewatering Unit is important to the overall management of Kentucky Reservoir sites

due primarily to its large acreage of waterfowl food crops; its importance for waterfowl hunting; and a contractual obligation that requires TVA to provide protection of the relocated railroad. It provides nearly 1,000 acres of agricultural cropland, of which approximately 300 acres are left unharvested for winter migratory waterfowl and wildlife. The Camden Dewatering Unit is recognized as one of Tennessee's premier waterfowl hunting areas with over 2,000 annual entries in the lottery for 47 duck blind sites.

In addition, the Camden Dewatering Unit contains approximately 34,200 linear feet of constructed levees with an originally designed top elevation of 364 feet; a spillway at an elevation of 363 feet; approximately 13.2 miles of internal drainage ditches or canals; and a pumping station. The pump house consists of three pumps and electric motors, which provide the total original pumping capacity of 145,000 gpm, three flap gates, two sluice gates, and three concrete discharge culverts. Typically, spring drawdown at the Camden Dewatering Unit begins around March 15 with the impoundment water elevation around 354-feet msl and continues until early April when the water elevation is pumped to between 345- and 347 feet msl. This elevation is maintained until the beginning of November when pumping is discontinued and the impoundment fills to the approximate target elevation of 355.5 feet msl by the first part of December.

2.3.3.4 Duck River Dewatering Unit

The Duck River Dewatering Unit is considered part of the TNWR and is managed solely by the USFWS. The drawdown of these impoundments generally occurs in early March. Fall filling of most of the unit occurs by rainfall. A few small impoundments are typically filled by the use of portable pumps.

2.3.3.5 East Perryville Dewatering Unit

A large flood event over 20 years ago resulted in a breached levee at the East Perryville Dewatering Unit. Currently, there is no intent to return the project to operation. The pump house remains in place and is accessed through the Mousetail Landing State Park. Some wildlife management activities were implemented during the late 1980's and early 1990's on the project lands but the site has since reverted to a natural state.

2.3.3.6 Gumdale Dewatering Unit

In February 2012, TVA breached the Gumdale levee and removed the pump house structure. After the pump house was demolished and the levee breached, the entire area of disturbance was graded to provide a public use area and fishing berm.

2.3.3.7 Perryville Dewatering Unit

The Perryville Dewatering Unit consists of approximately 3,200 linear feet of constructed levee, 3.4 miles of drainage ditches, and a pumping station located within approximately 344 acres of land. Approximately 250 acres of this area is dewatered. Like the other dewatering units on the Kentucky Reservoir, Perryville is currently operated for fishing and hunting benefits through the manipulation of its sluice gates only. In 2001, TWRA requested this land be removed from their Wildlife Management responsibilities because of the limited wildlife benefits provided by this small project. The pump station and spillway are located adjacent to the Beech River Campground, currently managed by Decatur County, Tennessee.

2.3.3.8 West Sandy Dewatering Unit

The West Sandy Dewatering Unit consists of approximately 6,373 acres TVA land which were originally designed, constructed, and operated for mosquito control, cropland, and management of bottomland hardwoods. The West Sandy Dewatering Unit has approximately 3,600 linear feet of levees, with originally designed crest elevation of 365-feet msl; a pump house; and almost 32 miles of internal drainage ditches or canals. Four major tributaries drain the dewatering unit's 92,200-acre watershed. These tributaries must pass through the West Sandy project and pump station before entering Kentucky Reservoir. It is also believed that numerous springs exist within the West Sandy project and watershed area because tributary flow is persistent even during extremely dry conditions.

The pump house at the West Sandy Dewatering Unit consists of six pumps and electric motors, which provide a total original pumping capacity of 250,000 gpm, six flap gates, four sluice gates, and four concrete discharge culverts. Typically, the spring drawdown at the West Sandy Dewatering Unit begins around the first of April with the impoundment water elevation around 354-feet msl and continues to until mid-April when the water elevation is pumped to between 345- and 347-feet msl. This elevation is maintained until late October when pumping is discontinued and the impoundment fills to the approximate target elevation of 356-feet msl by around the middle of November. The area continues to fill more slowly until it reaches a desired winter elevation of around 358-feet msl. The water elevation within the impoundment is maintained at this level until mid-February when the sluice gates are opened again to equalize the water level with that of Kentucky Reservoir's winter pool level, approximately 354-feet msl.

2.3.4 Embankment Protection Plantings

During construction of Kentucky Dam, TVA determined the impoundment would flood some highways and railroads, and this critical infrastructure was relocated. TVA relocated portions of

the roads across bottomland areas. The relocated roads were constructed at such an elevation to avoid flooding during reservoir flood control operations. However, the floodwaters would abut the road rights-of-way (ROWs) and associated embankments. During flood events, there was a potential to incur wind–induced wave action on the embankments, which could result in erosion damages to these structures. Trees were planted along the embankments to reduce the wind velocity.

Tree planting was initiated in 1942 and concluded in 1946. During this short period, over two million trees, including replacements, were planted across 64 projects. This tree-planting effort spanned across 1,055 acres (Table 2-18). The plantations ranged in size from 0.5 acre to approximately 70 acres. The tree species planted were bald cypress, green ash, northern white-cedar, Atlantic white-cedar, yellow poplar, loblolly pine, water tupelo, sweet gum, white ash, red maple, cottonwood, water oak, willow oak, nuttall oak, overcup oak, sycamore, and red mulberry. Species selection was based relative water tolerance to endure flood events. Since 1946, these plantings have been largely undisturbed.

Table 2-18. Summary of Embankment Protection Planting Efforts

Tree Species	Measureable Acreage	Number of Projects Species Planted
Atlantic white–cedar	30	15
Bald cypress	450	63
Cottonwood	55	24
Green ash	400	64
Loblolly pine	70	27
Mulberry	4	2
Northern white–cedar	5	11
Nuttall oak	1	2
Overcup oak	10	5
Red maple	40	14
Sweetgum	155	55
Sycamore	25	24
Water oak	20	16
Water tupelo	135	31
White ash	50	28
Willow oak	30	17
Yellow–poplar	35	18

2.3.5 Land Between the Lakes

LBL is a 170,000-acre outdoor recreation and environmental education area in west Kentucky and Tennessee. The area was established in 1963 when President John F. Kennedy assigned TVA a mission to demonstrate how an area (known then as “between the rivers”) with limited timber, agricultural, and industrial resources could be converted into a recreation asset that would stimulate economic growth in the region. The President's rationale was that a recreation area within the region would attract large numbers of visitors that, in turn, would stimulate the regional economy through tourist spending. With that authorization and congressional funding for land purchase in 1964, TVA began the task of developing LBL. TVA subsequently developed LBL into a national recreation and environmental education demonstration area because of the national and regional need for environmental awareness and sound resource management examples on public lands (TVA 1994). On April 1, 1998, the Land Between the Lakes Protection Act of 1998 (LBL Act) was enacted. The LBL Act transferred the administrative jurisdiction of LBL from TVA to the U.S. Forest Service effective October 1, 1999. Additional information about LBL can be found at www.lbl.org.

2.3.6 Trail of Tears National Historic Trail

Trail of Tears National Historic Trail was designated by the U.S. National Park Service to commemorate the 1838 historic passage of thousands of Indians from their homelands in the Southeast to Indian Territory in the West to what is now Oklahoma. Many people perished during this journey. There are land and water components of the trail crossing through Tennessee River in Benton, Hardin and Humphrey counties. The Trail’s overland portion was reconstructed from historical research and some field verification; therefore TVA may not know the exact locations of overland portions. The water component used by canoe spans the length of the Tennessee River from Pickwick Dam Reservation to Kentucky Dam Reservation. The land component of the trail crosses the Tennessee River at Savannah, Tennessee and also may cross the Tennessee River on TVA land just north of Johnsonville State Historic Park on Kentucky Reservoir.

2.4 Future Management of Reservoir Lands

Varying types of land management or conservation techniques coupled with development could occur along Kentucky Reservoir mostly due to the overall size of the reservoir. The implementation of the NRP would drive the types of programs conducted on TVA lands set aside due to natural or sensitive resources. Business opportunity, overall economy, local incentives, and community planning practices are factors that could contribute to the types of

industry locating or expanding along the reservoir. Recreation demand is driven by population levels, recreation participation rates, changing preferences for different types of recreation, and innovations in recreation equipment. Residential development is often times opportunistic; however, the lands set aside for such use are based on the types of property rights conveyed by TVA upon sale of the property. The TVA lands managed by other federal, state, or local agencies would most likely continue to do so in a similar manner.

This page intentionally left blank

CHAPTER 3. LAND PLANNING PROCESS

3.1 Process for Planning Land

The reservoir land management planning process involves allocation of reservoir land to seven defined land use zones, six of which are comprised of property owned by TVA in fee. The term "land use zone" refers to a descriptive set of criteria given to distinct areas of land based on location, features, and characteristics. The land use zone definitions listed in Table 3-1 are identical to those listed in the NRP. The definition of a land use zone corresponds with how TVA will manage land in that zone, and allocation of a parcel to a particular land use zone identifies that land for specific uses. Implementation of an RLMP minimizes conflicting land uses and makes it easier to handle requests for use of public land.

This draft RLMP was developed by a team of land managers and technical experts from TVA, knowledgeable about the reservoir and its resources. The planning team proposed land use decisions by integrating public needs, environmental conditions, economic benefits, state and federal rules and regulations, and the original congressional intent of the Kentucky Reservoir project. The process includes information from resource data, computer analysis, the public, other agencies, and knowledgeable TVA staff. This draft RLMP is consistent with the strategic direction of the NRP and the objectives of the CVLP. Furthermore, the categorization and management of TVA-owned Shoreline Access land along Kentucky Reservoir tiers from the SMI EIS (TVA 1998).

The planning process is completed once TVA conducts an environmental review of the draft RLMP as well as reasonable alternatives, in compliance with NEPA. This process allows the public and intergovernmental partners to review TVA's proposed allocations and provide input.

Table 3-1. Land Use Zone Definitions

Zone	Definition
Zone 1 Non–TVA Shoreland	Shoreland that TVA does not own in fee. This land may be privately owned or owned by a governmental entity other than TVA. Uses of this non–TVA land may include residential, industrial, commercial, and/or agricultural. In many instances, TVA may have purchased the right to flood and/or limit structures on this non–TVA land (i.e., flowage easement). TVA's permitting authority under Section 26a of the TVA Act applies to construction of structures on non–TVA shoreland. Non–TVA shoreland allocations are based on deeded rights and, therefore, will not change as a result of the lands planning process. This category is provided to assist in comprehensive evaluation of potential environmental impacts of

Zone	Definition
	TVA's allocation decision.
Zone 2 Project Operations	Land currently used, or planned for future use, for TVA operations and public works projects, including: • Land adjacent to established navigation operations — Locks, lock operations and maintenance facilities, and the navigation work boat dock and bases. • Land used for TVA power projects operations — Generation facilities, switchyards, and transmission facilities and rights–of–way. • Dam reservation land — Areas acquired and managed for the primary purpose of supporting the operation and maintenance of TVA dams and associated infrastructure; secondary uses may also include developed and dispersed recreation, maintenance facilities, miscellaneous TVA field offices, research areas, and visitor centers. • Navigation safety harbors/landings — Areas used for tying off commercial barge tows and recreational boats during adverse weather conditions or equipment malfunctions. • Navigation dayboards and beacons — Areas with structures placed on the shoreline to facilitate navigation. • Public works projects — Includes rights-of-way for public utility infrastructure, such as sewer lines, water lines, transmission lines, and major highway projects.
Zone 3 Sensitive Resource Management	Land managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment. Recreational natural resource activities, such as hunting, wildlife observation, and camping on undeveloped sites, may occur in this zone, but the overriding focus is protecting and enhancing the sensitive resource the site supports. Areas included are: • TVA–designated sites with potentially significant archaeological resources. • TVA public land with sites/structures listed in or eligible for listing in the National Register of Historic Places**.** • Wetlands — Aquatic bed, emergent, forested, and scrub-shrub wetlands as defined by TVA. • TVA public land under easement, lease, or license to other agencies/individuals for resource protection purposes. • TVA public land fronting land owned by other agencies/individuals for resource protection purposes. • Habitat protection areas — These TVA natural areas are managed to protect populations of species identified as threatened or endangered by the U.S. Fish and Wildlife Service, state-listed species, and any unusual or exemplary biological communities/geological features. • Ecological study areas — These TVA natural areas are designated as suitable for ecological research and environmental education by a recognized authority or agency. They typically contain plant or animal populations of scientific interest or are of interest to an educational institution that would utilize the area. • Small wild areas — These TVA natural areas are managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural, scenic, or aesthetic qualities that can also support dispersed, low–impact types of outdoor recreation. • River corridor with sensitive resources present — A river corridor is a

Zone	Definition
	segment of a river and the adjacent land along the banks. River corridors often consist of a linear green space of TVA land serving as a buffer to tributary rivers entering a reservoir. These areas will be included in Zone 3 when identified sensitive resources are present. • Significant scenic areas — Areas designated for visual protection because of their unique vistas or particularly scenic qualities. • Champion tree site — Areas designated by TVA as sites that contain the largest known individual tree of its species in that state. The state forestry agency "Champion Tree Program" designates the tree, while TVA designates the area of the sites for those located on TVA public land. • Other sensitive ecological areas — Examples of these areas include heron rookeries, uncommon plant and animal communities, and unique cave or karst formations.
Zone 4 Natural Resource Conservation	Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Areas included are: • TVA public land managed for wildlife or forest management projects. • TVA public land under easement, lease, or license to other agencies for wildlife or forest management purposes. • TVA public land fronting land owned by other agencies for wildlife or forest management purposes. • Dispersed recreation areas maintained for passive, dispersed recreation activities, such as hunting, hiking, bird watching, photography, primitive camping, bank fishing, and picnicking. • Shoreline conservation areas — Narrow riparian strips of vegetation between the water's edge and TVA's back–lying property that are managed for wildlife, water quality, or visual qualities. • Wildlife observation areas — TVA natural areas with unique concentrations of easily observed wildlife that are managed as public wildlife observation areas. • River corridor without known sensitive resources present — A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. River corridors will be included in Zone 4 unless sensitive resources are present (see Zone 3). • Islands where sensitive resources are not know to be present of which support existing development.
Zone 5 Industrial	Land currently used, or planned for future use, for economic development, including businesses in distribution/processing/assembly and manufacturing. Preference will be given for businesses requiring water access. There are two primary types of uses for TVA land allocated for Industrial: (1) access for water supply or structures associated with navigation such as barge terminals, mooring cells, etc., or (2) land–based development potential. Areas included are: • TVA public land under easement, lease, or license to other agencies/individuals/ entities for industrial purposes. • TVA public land fronting land owned by other agencies/individuals/entities for industrial purposes. In some cases, TVA land allocated to industrial use would be declared surplus and sold at public auction.

Zone	Definition
	Types of development that can occur on this land are: • Industry — Manufacturing, fabrication, and distribution/processing/assembly involving chemical, electronics, metalworking, plastics, telecommunications, transportation, and other industries. Industry does not include retail or service–based businesses. • Industrial access — Access to the waterfront by back–lying property owners across TVA property for water intakes, wastewater discharge, or conveyance of commodities (i.e., pipelines, rail, or road). Barge terminals are associated with industrial access corridors. • Barge terminal sites — Public or private facilities used for the transfer, loading, and unloading of commodities between barges and trucks, trains, storage areas, or industrial plants. • Fleeting areas — Sites used by the towing industry to switch barges between tows or barge terminals that have both offshore and onshore facilities. • Minor commercial landing — A temporary or intermittent activity that takes place without permanent improvements to the property. These sites can be used for transferring pulpwood, sand, gravel, and other natural resource commodities between barges and trucks.
Zone 6 Developed Recreation	Land currently used, or planned for future use, for concentrated, active recreational activities that require capital improvement and maintenance of developed infrastructure, including: • TVA public land developed for recreational purposes, such as campgrounds, day use areas, etc. • TVA public land under easement, lease, or license to other agencies/individuals/entities for developed recreational purposes. • TVA public land fronting land owned by other agencies/individuals/entities for developed recreational purposes. Residential use, long–term accommodations, and/or individually owned units are not permitted on land allocated for developed recreation. Types of development that can occur on this land are: • Public recreation — Recreation amenities developed and owned by a public agency that are open to the public. Public recreation areas may have varying levels of development, ranging from a water access site (e.g., launching ramp) to a marina facility. Facilities at public recreation areas could include playgrounds/play structures, picnic facilities, tennis courts, horseshoe areas, play courts, recreation centers, trails, greenways, natural areas, amphitheaters, food concessions (vending, snack bar), access to water for fishing and boating, swimming areas and swimming pools, launching ramps, courtesy piers, canoe access, marina facilities owned by the public entity, parking, and campgrounds. Cabins or other overnight accommodations (other than campgrounds) are only permitted if the public recreation area is operated by a state or state agency as a component of a state park system. • Public recreation areas and facilities are typically owned and operated by the federal, state, county, or local government. However, private entities may operate recreation facilities on public recreation land as concessionaires under agreement with the public entity controlling the property. The use of the facilities may be offered free or for a fee. Time–forward, public–private partnerships where facilities are owned by private investors will not be approved on public recreation land. All structures and facilities should be owned by the public entity.

Zone	Definition
	• Commercial recreation — Recreation amenities that are provided for a fee to the public intending to produce a profit for the private owner/operator. These primarily water–based facilities typically include marinas and affiliated support facilities such as stores, restaurants, campgrounds, and cabins and lodges. Where applicable, TVA will require appropriate compensation for the commercial use of the property.
Zone 7 Shoreline Access	TVA–owned land where Section 26a applications and other land use approvals for residential shoreline alterations are considered in accordance with TVA's Shoreline Management Policy. Types of development/management that may be permitted on this land are: • Residential water use facilities, e.g., docks, piers, launching ramps/driveways, marine railways, boathouses, enclosed storage space, and nonpotable water intakes. • Shoreline access corridors, e.g., pathways, wooden steps, walkways, or mulched paths that can include portable picnic tables and utility lines. • Shoreline stabilization, e.g., bioengineering, riprap, gabions, and retaining walls. • Shoreline vegetation management.

Prior to proposing parcel allocations, the TVA planning team reviewed the characteristics of each parcel (i.e., location and existing conditions). TVA also reviewed deeds to land previously sold to private entities to identify existing shoreline access rights. In addition, the planning team honored existing commitments associated with long-term contractual agreements—that is, existing leases and easements. The planning team determined the need for field reviews for uncommitted parcels based on data from the TVA Natural Heritage Database; the planning team and subject matter experts then conducted field reviews on a portion of the TVA natural areas. Next, the planning team placed land with known sensitive resources in the Sensitive Resource Management zone. The planning team proposed allocations of remaining parcels based on reservoir planning objectives and public input. When developing the draft RLMPs, the planning team identified proposed allocations of reservoir parcels to one of seven planning zones using the zone definitions listed above.

In the draft RLMP, TVA proposes to allocate land currently committed to a specific use to a zone compatible with that use unless there is an overriding need to change the use. Some committed land uses were determined by the covenants and provisions of easements, leases, sale, and/or transfer agreements. Committed lands include the following: properties where TVA has granted landrights (easements, leases, etc.) for specific uses, properties where TVA has previously identified resources in need of protection, Project Operations lands (transmission lines, dam reservations, public infrastructure, etc.), and lands fronting wildlife management areas. Possible reasons to change a committed land use would be to honor existing shoreline

access rights and/or prevent or remedy ongoing adverse impacts resulting from the actions of a license or easement holder.

Existing agreements, TVA operations and other public infrastructure projects account for approximately 38,983 acres (52 percent) of the TVA land surrounding Kentucky Reservoir. Agricultural licenses are not considered as committed uses because they are an interim use of TVA land.

Approximately 35,730 acres (48 percent) of the TVA land surrounding Kentucky Reservoir is uncommitted. The planning team collected data on many uncommitted parcels to identify areas containing sensitive resources. Representatives from various TVA organizations met to propose how these uncommitted lands should be allocated into the seven planning zones. The location of known and potentially sensitive resources was used in determining the best potential use for each parcel of land.

3.2 Kentucky Reservoir Land Planning Goal and Objectives

The NRP established long-term land planning goals and objectives. While these goals and objectives were established to guide planning decisions across the Valley, these same goals and objectives can be applied when planning specific reservoirs.

Goal

TVA will strive to continue to balance shoreline development, recreational use, sensitive and natural resource management, industrial use and other land uses in a way that maintains the quality of life and other important values across the region.

Objectives

- Apply a systematic method of evaluating and identifying the most suitable uses of TVA public lands using resource data, stakeholder input, suitability and capability analyses, and TVA staff input.
- Identify land use zone allocations to optimize public benefit and balance competing demands for the use of public lands.
- Identify land use zone allocations to support TVA's broad regional resource development mission. TVA reservoir properties are managed to provide multiple public benefits, including recreation, conservation, and economic development.

- Provide a clear process by which TVA will respond to requests for use of TVA public land.
- Comply with federal regulations and executive orders.
- Enhance the protection of significant resources, including threatened and endangered species, cultural resources, wetlands, unique habitats, natural areas, water quality, and the visual character of the reservoir.
- Provide a mechanism that allows local, state, and federal infrastructure projects when the use is compatible with the zone allocation.

3.3 RLMP Parcel Allocations

TVA used its land planning process (Section 3.1) along with the goals and objectives specific to Kentucky Reservoir (Section 3.2) to propose suitable allocations to one of the seven planning zones, as indicated in Table 3-2, and develop the draft RLMP.

Table 3-2. Summary of Proposed Land Use Allocations for Kentucky Reservoir Land Management Plan (Alternative B)

Allocation Designation		Number of Parcels	Acres
Zone 2	Project Operations	54	1,254.3
Zone 3	Sensitive Resource Management	50	5,282.1
Zone 4	Natural Resource Conservation	196	55,319.3
Zone 5	Industrial	13	2,081.3
Zone 6	Developed Recreation	110	5,006.7
Zone 7	Shoreline Access	152	5,769.7
Total		**575**	**74,713.5**

The percent of land acreage on Kentucky Reservoir that would be allocated to each land use zone under the Draft RLMP is shown in Figure 3-1. A detailed description of each zone and the identification of the land zoned by each category is presented below.

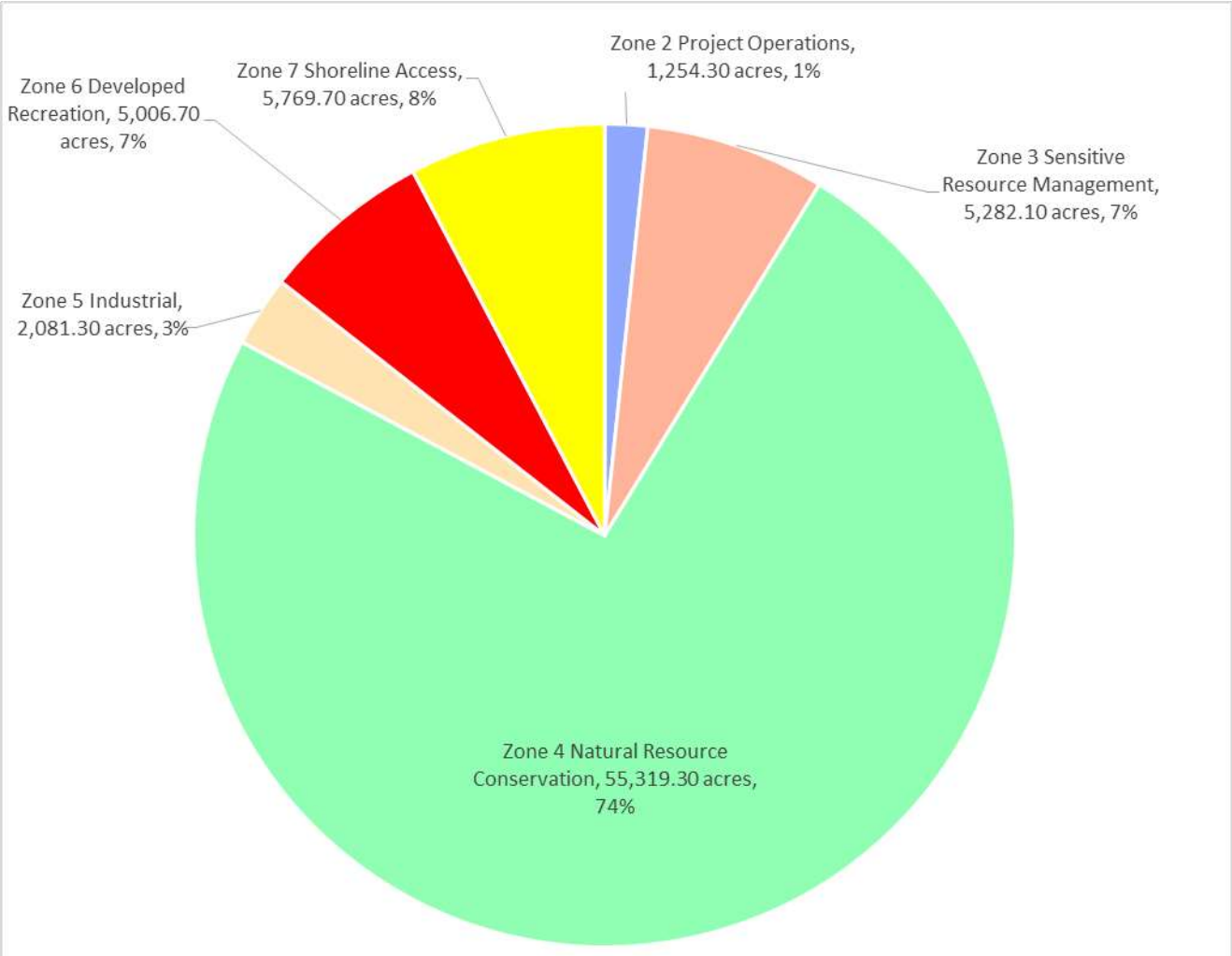


Figure 3-1. Percent of Kentucky Reservoir Acreage Allocated by Zone

- Zone 2 (Project Operations). Zone 2 encompasses all TVA land currently used for TVA operations and public works projects. Under the draft RLMP, approximately 1 percent (1,254.3 acres) of TVA owned land on Kentucky Reservoir would be allocated to Zone 2. The largest parcel that would be allocated as Zone 2 is Kentucky Dam Reservation which also contains the powerhouse and associated access roads, transmission lines and substations; navigation lock and associated access roads and mooring cells; roads; highways; railroads; and boat launching ramp. Kentucky Dam is a historically significant structure and eligible for listing on the NRHP.

- Zone 3 (Sensitive Resource Management). Zone 3 lands are managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA,

include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment. Under the draft RLMP, approximately 7 percent (5,282.1 acres) of the TVA land on Kentucky Reservoir would be allocated to Zone 3. The parcels included in this allocation represent areas where high-quality wetland habitat, wildlife habitat, scenic buffers, or cultural and historic resources are known to be present. The largest parcel that would be allocated to Zone 3, Parcel 446, consists of 1,071.7 acres and contains three TVA-designated natural areas: McCuiston Woods Small Wild Area (SWA), Panther Creek Swamp Habitat Protection Area (HPA), and the newly proposed Blood River HPA.

- Zone 4 (Natural Resource Conservation). Lands allocated to Zone 4 are managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Under the draft RLMP, most of the TVA land (55,319.3 acres or 74 percent) would be allocated to Zone 4. The largest parcel that would be allocated as Zone 4 is Parcel 101, which is 23,820 acres and contains all lands considered as part of the TNWR which is managed by the USFWS. Other large parcels, such as Parcels 354, 375 and 266, encompass dewatering units and other land that are managed by TVA and/or other agencies.

- Zone 5 (Industrial). Lands allocated as Zone 5 are managed for economic development including businesses in distribution/processing/assembly and light manufacturing. Approximately 3 percent of TVA land (2,081.3 acres) around this reservoir would be allocated to Zone 5. Lands allocated to this zone reflect existing industrial uses or those that would be suitable for future industrial use. For example, Parcel 139 is undeveloped deciduous forest, but is well-served by existing infrastructure and back-lying property has been cleared for timber. Groupings of islands protect the shoreline and would provide a natural safety harbor for the transportation of goods associated with an industrial site. Any request for development of this property would require a site-specific environmental review conducted prior to any ground disturbance.

- Zone 6 (Developed Recreation). Lands allocated as Zone 6 is currently used or planned for recreational purposes, such as boat-launching ramps, campgrounds, marinas, or parks. For example, Parcel 121 comprises 1,191.1 acres and is developed as Mousetail

Landing State Park. The park is managed by the State of Tennessee and facilities at the park include a visitor center, trails, campground, picnic areas, swimming beach, and shoreline fishing facilities. Parcel 90 includes 525.5 acres and is managed by the State as a part of Johnsonville State Historic Park. Management emphasis is on the protection and interpretation of historical and cultural features. Visitor accommodations include an interpretive center, museum, picnic facilities and trails. A section of this parcel is leased to Pebble Isle Marina for commercial recreation purposes. Approximately 7 percent of TVA land on this reservoir (5,006.7 acres) would be allocated to Zone 6.

- Zone 7 (Shoreline Access). Lands that would be allocated to Zone 7 comprises 5,769.7 acres (8 percent) of the shoreland on Kentucky Reservoir. Zone 7 lands are TVA-owned lands where Section 26a applications and other land use approvals for private shoreline alterations are considered. Requests for private shoreline alterations are considered on parcels identified in this zone where such use was previously considered, and/or where the back-lying landowner possesses deeded rights of access, and where the proposed use would not conflict with the interests of the public.

These proposed allocations vary somewhat from TVA's estimates for land use allocations on Kentucky Reservoir contained in the CVLP developed in 2011. At the time, TVA anticipated that some parcels of land may be better allocated to different land use zones. As discussed in Volume I of the EIS, TVA proposes to update the target allocation ranges of the CVLP based on the eight draft RLMPs and to recalibrate the CVLP in the future with the periodic updates to the NRP. Table 3–3 compares the results of this land planning effort with the estimates made by TVA in 2011 for Kentucky Reservoir.

Table 3-3. Kentucky Reservoir Land Management Plan and 2011 Comprehensive Valleywide Land Plan Comparison

Allocation Designation		Kentucky Reservoir Land Management Plan	2011 Comprehensive Valleywide Land Plan
Zone 2	Project Operations	1.6%	1%
Zone 3	Sensitive Resource Management	7.1%	2%
Zone 4	Natural Resource Conservation	74.3%	84%
Zone 5	Industrial	2.8%	2%
Zone 6	Developed Recreation	6.7%	5%
Zone 7	Shoreline Access	7.6%	6%

For the following reasons, this draft RLMP allocates a greater number of lands to all land use zones except Zone 4 (Natural Resource Conservation). A fewer number of acres would be allocated to Zone 4 (Natural Resource Conservation) than estimated in the 2011 CVLP. These lands would be placed into the more appropriate designations, as discussed below:

Zone 2 (Project Operations)
TVA relocated a great number of highways during the development of Kentucky Dam. Portions of these highways remain on TVA lands with easements to the appropriate managing agency. The amount of lands encumbered with roadways was underestimated by TVA when it developed its CVLP in 2011. In the draft RLMP, these parcels would be allocated to Zone 2, which results in an increase of Zone 2 lands.

Zone 3 (Sensitive Resource Management)
The greatest change from the 2011 CVLP and this draft RLMP occurs within the Zone 3 designation, in part because TVA obtained additional information on sensitive cultural resources during this planning effort. TVA allocated uncommitted lands with a high potential for the presence of cultural resources to Zone 3. In addition, the uncommitted lands adjacent to the Duck River would be placed in the Zone 3 category due to the world-renowned uniqueness of the water body (additional information about the Duck River can be found on the State of Tennessee's Web site, http://www.state.tn.us/environment/tn_consv/archive/duckriver.htm). These changes resulted in an increase of lands that would be allocated to Zone 3.

Zone 4 (Natural Resource Conservation)

TVA proposes to allocate a greater number of lands to the Zone 4 category. These lands were previously allocated for Zone 3 (Sensitive Resource Management) or Zone 6 (Developed Recreation) in the 2011 CVLP.

Zone 5 (Industrial)
After reviewing the availability of public infrastructure and the presence of known sensitive resources, several small tracts of land previously allocated to Zone 5 were determined to be no longer suitable for future industrial development and would be reallocated. However, a large tract of land is proposed to be set aside for future industrial use under the draft RLMP, which would result in the increase to Zone 5 category.

Zone 6 (Developed Recreation)
The 2011 CVLP did not allocate all of the small boat ramps managed by other agencies to Zone 6. TVA reviewed these allocations and is proposing to reallocate these small areas to Zone 6 to reflect their current and intended use, which would result in an increase to Zone 6 property.

Zone 7 (Shoreline Access)
In developing its CVLP in 2011, TVA also underestimated the amount of former TVA property encumbered with shoreline access rights. The draft RLMP would increase the amount of lands allocated to Zone 7 to reflect existing rights. Frequently, former TVA properties and associated shorelines remain undeveloped.

Of the 74,713.5 acres on Kentucky Reservoir, there are no proposed allocation changes to 64,745.6 acres (86.7 percent); all proposed allocation changes involve 9,967.9 acres (13.3 percent). Of the 9,967.9 acres, TVA would allocate 4,057.5 acres (40.7 percent) to reflect existing land use agreements or commitments. The remaining 5,910.4 acres (59.3 percent) involve proposed parcel allocations that are not based on existing land use agreements or commitments. See Appendix B for parcel allocation description tables.

3.4 Property Administration

As stewards of public land, TVA uses the RLMP, along with TVA policies and guidelines, to manage resources and to respond to requests for the use of TVA land. Inquiries about or requests for the use of TVA land should be made to the TVA Public Land Information Center at 800-TVA-LAND or 800-882-5263 between 8 a.m. and 6 p.m. Eastern time Monday through Friday.

Pursuant to the TVA Land Policy, TVA would consider changing a land use designation outside of the normal planning process only for the purpose of water access for industrial or commercial recreational operations on privately owned back-lying land or to implement TVA's SMP.

Additionally, there are a small number of TVA parcels on Kentucky Reservoir over which the upland property owners have deeded access rights that would support a Zone 7 (Shoreline Access) allocation for the TVA land, but the private owners currently are using their upland property for non-residential uses such as commercial, industrial, or developed recreation activities. TVA has zoned these parcels according to the current uses of the upland properties. However, consistent with TVA's SMP, TVA would, subject to appropriate environmental review, consider requests to revise the allocations of these parcels to Zone 7 (Shoreline Access) in the event the use of the upland property changes to residential.

Consistent with the TVA Land Policy, those parcels or portions of parcels that have become fragmented from the reservoir may be declared surplus and sold at public auction. Public works/utility projects, such as easements for pipelines, power or communication wires, roads, or other public infrastructure, proposed on TVA land that would not substantially change the zoned land use or adversely impact sensitive resources would not require an allocation change as long as such projects would be compatible with the use of the allocated zone. Proposed public works/utility projects would be subject to a project-specific environmental review. Any other requests involving a departure from the planned uses would require appropriate approval. Proposals consistent with TVA's policies and the allocated use, and otherwise acceptable to TVA, will be reviewed in accordance with NEPA and must conform to the requirements of other applicable environmental regulations and other legal authorities.

This page intentionally left blank

CHAPTER 4. PARCEL DESCRIPTIONS

This chapter describes the proposed land use determined to be most suitable for each parcel of TVA land as shown on the plan maps (Appendix A, Panels 1-12). The parcel descriptions include the acreage rounded to the nearest tenth and the planned land use. Relevant data regarding the proposed land use are provided for each tract and include existing land uses, physical characteristics of the land, presence of existing private water use facilities, and any special considerations related to the future use. All existing private water use facilities with TVA permits are grandfathered, provided they are constructed in accordance with the plans approved by TVA.

Identified from the TVA Natural Heritage database searches are presented in this parcel is located downstream of the Kentucky Dam and is adjacent to the dam reservation property. The majority of this parcel is open grassland. The parcel also provides beneficial habitat for several bird species and a diversity of wetland wildlife species. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-1. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Livingston, Kentucky
Topographic Map (Sheet No. and Quadrant)	5–SE
TVA D–Stage Map Numbers	4
Stream Mile and Bank	TRM 21.3R
Land Use/Land Cover	Mixture of open grasslands, forested wetlands, and deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license to West Kentucky Electric Cooperative Corporation for electric utilities
Potential Projects	None identified
Potential Partners	None identified

+Parcel 2 – (559.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is the Kentucky Dam Reservation and receives heavy informal public use. Existing facility development includes the dam powerhouse and associated access roads, transmission lines and substations; navigation lock and associated access roads and mooring cells; roads; highways; railroads; and boat launching ramp. United States (US) Route 62, which runs from the United States of America and Mexico border at El Paso, Texas, to Niagara Falls, New York, is located on this parcel and runs downstream of Kentucky Dam. Old portions of US Route 62, which ran along the top of Kentucky Dam, have been converted to a public access area with a bicycle trail. Because this parcel contains the Kentucky Dam reservation, it is also considered historically significant. Kentucky Dam is a historically significant structure and eligible for listing on the National Register of Historic Places. There is a high probability for the presence of additional cultural resources. Requests for private water use facilities would not be considered.

Table 4-2. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Livingston and Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	5–SE
TVA D–Stage Map Numbers	3 and 4
Stream Mile and Bank	TRMs 21.0–22.5B
Land Use/Land Cover	Mixture of deciduous forest, roads, and water control structures
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easement to Commonwealth of Kentucky for the existing highway • Permanent easement to Southern Bell for telephone lines
Potential Projects	None identified
Potential Partners	None identified

Parcel 3 – (121.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This linear parcel spans approximately 2.5 miles within the city of Grand Rivers, Kentucky. The parcel contains mostly the ROW for portions of US Route 62 and Kentucky State Route (KSR) 453. The non–ROW portion of this parcel has a moderate probability for the presence of

cultural resources, but the area has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-3. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Livingston, Kentucky
Topographic Map (Sheet No. and Quadrant)	5–SE, 16–SW, and 17–NW
TVA D–Stage Map Numbers	4 and 7
Stream Mile and Bank	TRMs 22.5–24.1R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Revocable license to Jackson Purchase Electric Cooperative for electric utilities • Revocable license to the City of Grand Rivers for antenna towers • Revocable license to the City of Grand Rivers for a parking lot
Potential Projects	None identified
Potential Partners	City of Grand Rivers

Parcel 4 – (428.4 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel consists of a large noncontiguous tract of land within the general vicinity of the City of Grand Rivers. Most of the parcel is encumbered with active industrial sites or transmission line ROWs. However, there are three portions of land with limited disturbance that could be considered for future industrial development. The two areas, approximately 20 acres and 100 acres, are located across from the existing Vulcan Materials Company. The land cover of these tracts is deciduous forest. The third area of land contains approximately 25 acres of deciduous forest and is located at TRM 24.9R. This area is also situated adjacent to property owned by BRT Transfer Terminal, Incorporated. The forested land has a moderate probability for the presence of cultural resources, but most of this area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support industrial purposes would be considered.

Table 4-4. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Livingston, Kentucky
Topographic Map (Sheet No. and Quadrant)	16–SW and 17–NW
TVA D–Stage Map Numbers	4 and 7
Stream Mile and Bank	TRMs 22.9–25.1R
Land Use/Land Cover	Road and transmission line rights–of–way, industrial, and deciduous forest
Current Agreements/Commitments	• Permanent easement to Kentucky Utilities Company for a transmission line • Permanent easement to Reed Crushed Stone Company for a barge terminal, industrial site, and rail road • Permanent easement to Reed Terminal Company for an industrial site • Revocable license to the City of Grand Rivers for water and sewer lines • Revocable license to Jackson Purchase Electric Cooperative Corporation for electric utilities • Revocable license to South Central Bell for telephone lines • Revocable license to Southern Bell for telephone lines • Revocable license to Western Kentucky Rural Electric Cooperative Corporation for electric utilities

Parcel 5 – (19.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of the Tennessee River and approximately one mile downstream of the Barkley canal. The parcel can be accessed from KSR 453. There are two noncontiguous tracts of land within this parcel. The narrow parcel includes only TVA shoreline bordering lands transferred to the city of Grand Rivers for public recreation (Tract No. XTGIR-91). Facilities at Grand Rivers Park include a marina, boat ramp, picnic area, swimming beach, trails, sports fields, campground, a motel, rental cabins, and walking trails. The second tract of land is located on the opposite side of KSR 453. This tract is managed under an easement (Tract No. XGIR-923RE) to Tuller Enterprises in connection with Patti's Restaurant. Recreational amenities include grist mill, miniature golf course, shopping, trails, pavilion, chapel, petting zoo, and model of an 1880's village. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered. However, this parcel has not been surveyed for cultural resources.

Table 4-5. Parcel Information

Location Component	Parcel Specific Information
County, State	Livingston, Kentucky
TVA D–Stage Map Numbers	7
Stream Mile and Bank	TRM 24R

Parcel 6 – (21.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the Livingston and Lyon, Kentucky county line adjacent to the canal connecting Kentucky Reservoir and Lake Barkley. The land cover for the entire tract is deciduous forest. A portion of this tract is under a permanent easement to the U.S. Army Corps of Engineers (USACE) for the management of the Barkley Canal. There is an adjacent parking area developed by USACE that provides public access for bank fishing along the Barkley Canal shoreline. There is a medium probability of the presence of cultural resources on this parcel; however, the area has not been surveyed. No federally or state-listed as endangered, threatened, or special status species are known to occur on this parcel. No existing shoreline improvements are currently present and requests for private water use facilities would not be considered.

Table 4-6. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lyon, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	8
Stream Mile and Bank	TRM 26R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	Bank fishing associated with adjacent U. S. Army Corps of Engineers fishing area
Current Agreements/Commitments	Permanent easement to the U.S. Army Corps of Engineers for Barkley Canal
Potential Projects	None identified
Potential Partners	None identified

Parcel 7 – (15.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located adjacent to the Land Between the Lakes and contains a portion of the ROW for US Route 79 and Tennessee State Route (TSR) 76. Requests for private water use facilities would not be considered.

Table 4-7. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	75
Stream Mile and Bank	TRM 66.2R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Permanent easement to Tennessee Department of Transportation for a highway
Potential Projects	None identified
Potential Partners	Tennessee Department of Transportation

Parcel 8 – (150.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This linear parcel is located south of US Route 79 Scott Fitzhugh Bridge and extends along the right descending bank of the Tennessee River to Standing Rock Creek. The land cover of the entire tract is predominantly upland deciduous forest. Access to this parcel is available via public roads and boat. A dispersed recreation impact analysis conducted was conducted in 2007, and the results of the study were seven highly impacted dispersed recreation sites along the downstream shoreline of this parcel. These sites are considered as candidates for future dispersed recreation impact projects. There is a low probability of the presence of cultural resources on this parcel. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present and requests for private water use facilities would not be considered.

Table 4-8. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Kentucky
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	75 and 76
Stream Mile and Bank	TRM 67.3R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	Bank fishing, swimming, camping, and hunting
Current Agreements/Commitments	None identified
Potential Projects	Mitigation of impacts from dispersed recreation sites
Potential Partners	None identified

Parcel 9 – (3.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is a designated safety harbor with two navigation mooring cells located along the shoreline. The cells are available for tying off commercial barges and recreational boats during adverse weather conditions or equipment malfunction. There is a moderate probability for the presence of cultural resources within this parcel. Future development of this tract will be restricted, and requests for private water use facilities would not be considered.

Table 4-9. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	75
Stream Mile and Bank	TRM 67.9R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 10 – (49.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous narrow strips of land located along the right descending bank of Standing Rock Creek. The parcel extends among TVA markers 75–54 to 76–73 and 76–63 to 76–64. This parcel lies entirely below the 375-foot msl, and the current land use varies from deciduous forest to maintained lawns. Longwood Ridge Subdivision, River Trace Subdivision, Standing Rock Development, and Tree Top Subdivision are located on the backlying private property. Water use facilities have been constructed along portions of the shoreline, and future requests for private water use facilities would be considered. However, a large wetland fronts this parcel from Standing Rock Creek Mile 1.7 to 2.3. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-10. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE and 29–NW
TVA D–Stage Map Numbers	75 and 76
Stream Mile and Bank	Standing Rock Creek Miles 0.5–2.3R
Land Use/Land Cover	Deciduous forest, maintained lawns, and wetlands
Fronts Former TVA Tract (s)	XGIR–248, XGIR–780, and XGIR–781
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 11 – (53.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located at the upper end of Standing Rock Creek. A small portion of this parcel is under a linear revocable license to support electric utilities. The land cover of the majority of this parcel is younger age deciduous forest, with forested and scrub-shrub wetlands occurring along the shoreline fringe. The parcel is accessible through public roads and currently used for hunting, fishing, and picnicking. A dispersed recreation impact analysis was conducted in 2007, and the results of the study identified two moderately impacted dispersed use sites along the south bank of Standing Rock Creek in the upper portion of this parcel. These sites are considered as candidates for future dispersed recreation impact projects. There is a low

probability of the presence of cultural resources on this parcel. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-11. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE and 29–NE
TVA D–Stage Map Numbers	76
Stream Mile and Bank	TRM 67.9R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Hunting, bank fishing, picnicking, and camping
Current Agreements/Commitments	Revocable license to Cumberland Electric Membership Corporation for electric utilities
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along the parcel boundaries and shoreline • Mitigation of impacts from dispersed recreation sites
Potential Partners	None identified

Parcel 12 – (27.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of a narrow strip of land located along the left descending bank of Standing Rock Creek and extends between TVA markers 76–68 to parcel 13. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have been constructed along portions of the shoreline, and future requests for private water use facilities would be considered. However, a large wetland fronts this parcel from Standing Rock Creek Mile 1.7 to 2.3. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-12. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	76
Stream Mile and Bank	Standing Rock Creek Miles 1.6–2L
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	XGIR–249 and portion of XGIR–250
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 13 – (3.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located approximately 1 mile off of TSR 232 and adjacent to Standing Rock Creek. This shoreline tract is licensed for commercial recreation and is managed as a part of Fat Daddy's Resort and Marina. Facilities at this area include a marina, restaurant, and boat ramp. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered. However, this parcel has not been surveyed for cultural resources.

Table 4-13. Parcel Information

Location Component	Parcel Specific Information
County, State	Stewart, Tennessee
TVA D–Stage Map Numbers	76
Stream Mile and Bank	TRM 68.3R

Parcel 14 – (153.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of a narrow strip of land located along both Standing Rock Creek and the Tennessee River. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Brownfield, Eagle's Rest, and Terro-Areo subdivisions are located on the backlying private property. Water use facilities have been constructed along portions of the shoreline, and future requests for private water use facilities would be considered. However, a large wetland fronts this parcel in Short Creek. Potential impacts to

wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-14. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE and 29–NW
TVA D–Stage Map Numbers	76 and 79
Stream Mile and Bank	Standing Rock Creek Miles 0–1.3L TRMs 68.6–71.4R
Land Use/Land Cover	Deciduous forest and maintained lawn
Fronts Former TVA Tract (s)	A portion of XGIR–250, XGIR–251, XGIR–252, XGIR–253, XGIR–254, XGIR–255, XGIR–256, and a portion of XGIR–257
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 15 – (4.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located about 4 miles off TSR 232. The waterfront parcel has been licensed for commercial recreation and is being managed as part of PJ's Resort. Current resort facilities include a campground, rental cabins, swimming pool, and boat ramp. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-15. Parcel Information

Location Component	Parcel Specific Information
County, State	Stewart, Tennessee
TVA D–Stage Map Numbers	82
Stream Mile and Bank	TRM 71.5R

Parcel 16 – (70.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three narrow strips of land located along the right descending bank of the Tennessee River. The parcel extends among Parcel 17 to TVA marker 83–70 and excludes Parcels 19 and 20. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Lakeshore and Leatherwood subdivisions are located

on the backlying private property. Water use facilities have been constructed along portions of the shoreline, and future requests for private water use facilities would be considered.

Table 4-16. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE and 29–NW
TVA D–Stage Map Numbers	82 and 83
Stream Mile and Bank	TRMs 71.4–73.1R
Land Use/Land Cover	Deciduous forest and maintained lawn
Fronts Former TVA Tract (s)	A portion of XGIR–258 and a portion of XGIR–259
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 17 – (21.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located at the mouth of Leatherwood Creek and is comprised of predominantly deciduous forest. The shoreline along this parcel has been stabilized to prevent further erosion. Public access to this parcel is by boat only. There is a high probability for the presence of cultural resources. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-17. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	83
Stream Mile and Bank	TRMs 73.0–73.4R
Land Use/Land Cover	Deciduous Forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries
Potential Partners	None identified

Parcel 18 – (1.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Leatherwood Creek. This parcel is under a revocable commercial recreation license and is being managed as part of Leatherwood Resort. Facilities offered at the resort include a marina, boat ramp, restaurant, campground, rental cabins, and swimming pool. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-18. Parcel Information

Location Component	Parcel Specific Information
County, State	Stewart, Tennessee
TVA D–Stage Map Numbers	83
Stream Mile and Bank	TRM 73.5R

Parcel 19 – (3.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the right descending bank of Leatherwood Creek. The land cover of the majority of this parcel is younger age deciduous forest, with forested and scrub-shrub wetlands occurring along the shoreline fringe. The parcel is accessible through public roads; however, public use is limited due to its small size. There is a low probability of the presence of cultural resources and no federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-19. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	83
Stream Mile and Bank	TRM 72.8R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 20 – (52.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of a narrow strip of land located along the right descending bank of Leatherwood Creek and extends between TVA markers 83–71 to 82–72. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Leatherwood and Sparrow subdivisions are located on the backlying private property. Water use facilities have been constructed along portions of the shoreline, and future requests for private water use facilities would be considered.

Table 4-20. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–NW and 29–SW
TVA D–Stage Map Numbers	83
Stream Mile and Bank	TRMs 71.4–73.1R
Land Use/Land Cover	Deciduous forest and maintained lawn
Fronts Former TVA Tract (s)	A portion of XGIR–259
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 21 – (7.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is a small tract of land located between TVA monuments 82-72 and 83-24 and along Leatherwood Creek. The land cover of most of this parcel is deciduous forest, with significant, high quality forested and scrub-shrub wetlands occurring along the shoreline fringe. The parcel provides beneficial habitat for wild turkey (*Meleagris gallopavo*) and other game species, as well as a diversity of wetland wildlife species. No federally or state-listed species are known to occur on this parcel. However, there is potential northern pine snake (*Pituophis melanoleucus*) habitat present. The northern pine snake is listed as a threatened species in Tennessee. In addition, bald eagles have historically nested on nearby Parcel 28. There is a moderate probability of the presence of cultural resources on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-21. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–NW
TVA D–Stage Map Numbers	83
Stream Mile and Bank	Leatherwood Creek Mile 1.2R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Limited Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along the parcel boundary and shoreline
Potential Partners	None identified

Parcel 22 – (0.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This small parcel is located along the right descending bank of Leatherwood Creek and extends between TVA markers 83–24 to Parcel 25. This parcel lies entirely below the 375-foot msl, and the current land use is a maintained lawn and road ROW. Water use facilities have been constructed along portions of the shoreline, and future requests for private water use facilities would be considered.

Table 4-22. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–NW
TVA D–Stage Map Numbers	83
Stream Mile and Bank	Leatherwood Creek Miles 1.3R
Land Use/Land Cover	Maintained lawn and road right–of–way
Fronts Former TVA Tract (s)	A portion of XGIR–260
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Permanent easement to Stewart County, Tennessee for a roadway

Parcel 23 – (2.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located near the mouth of Leatherwood Creek and has been licensed to TWRA for public recreation. A boat ramp and parking area have been developed on the parcel. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-23. Parcel Information

Location Component	Parcel Specific Information
County, State	Stewart, Tennessee
TVA D–Stage Map Numbers	83
Stream Mile and Bank	TRM 73.5R

Parcel 24 – (22.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of six narrow strips of land located along the right descending bank of Standing Rock Creek. The parcel extends among Parcel 25 to TVA marker 83–76; TVA markers 83–77 to 83–78; TVA markers 83–79 to 83–80; TVA markers 83–81 to 83–82; TVA markers 83–83 to 83–84; and TVA markers 83–85 to 83–86. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, a large wetland fronts most of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-24. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–NW
TVA D–Stage Map Numbers	83
Stream Mile and Bank	Leatherwood Creek Miles 1.5–2R
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	XGIR–261
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None identified

Parcel 25 – (25.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is composed of several smaller tracts of land along Leatherwood Creek. The land cover of most of this parcel is deciduous forest, with significant, high quality forested and scrub-shrub wetlands occurring along the shoreline fringe. The parcel provides beneficial habitat for wild turkey (*Meleagris gallopavo*) and other game species, as well as a diversity of wetland wildlife species. No federally or state-listed species are known to occur on this parcel. However, there is potential northern pine snake (*Pituophis melanoleucus*) habitat present. The northern pine snake is listed as a threatened species in Tennessee. In addition, bald eagles have historically nested on nearby Parcel 28. There is a moderate probability of the presence of cultural resources on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-25. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–NW
TVA D–Stage Map Numbers	83
Stream Mile and Bank	Leatherwood Creek Miles 1.5–2R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Limited Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along the parcel boundary and shoreline
Potential Partners	None identified

Parcel 26 – (29.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Leatherwood Creek and extends between TVA markers 83–87 to 83–88. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along portions of the shoreline, and future requests for private water use facilities would be considered. However, a large wetland fronts most of this parcel. Potential impacts to

wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-26. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–NW and 29–SW
TVA D–Stage Map Numbers	83
Stream Mile and Bank	Leatherwood Creek Miles 1.2–2R
Land Use/Land Cover	Deciduous forest, maintained lawn, and wetlands
Fronts Former TVA Tract (s)	A portion of XGIR–262
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 27 – (4.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is a small tract of land located between TVA monuments 83-88 and 83-89 and along Leatherwood Creek. The land cover of most of this parcel is deciduous forest, with significant, high quality forested and scrub-shrub wetlands occurring along the shoreline fringe. The parcel provides beneficial habitat for wild turkey (*Meleagris gallopavo*) and other game species, as well as a diversity of wetland wildlife species. No federally or state-listed species are known to occur on this parcel. However, there is potential northern pine snake (*Pituophis melanoleucus*) habitat present. The northern pine snake is listed as a threatened species in Tennessee. In addition, bald eagles have historically nested on nearby Parcel 28. There is a moderate probability of the presence of cultural resources on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-27. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–NW
TVA D–Stage Map Numbers	83
Stream Mile and Bank	Leatherwood Creek Mile 1.2L
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Limited Hunting
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along the parcel boundary and shoreline
Potential Partners	None identified

Parcel 28 – (13.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Leatherwood Creek and extends between TVA markers 83–89 to 83–91. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and one maintained lawn. Water use facilities have been constructed along portions of the shoreline, and future requests for private water use facilities would be considered. However, small wetlands front portions of this parcel. Additionally, a pair of bald eagles nested along portions of this shoreline in previous years. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-28. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	83
Stream Mile and Bank	Leatherwood Creek Miles 0.4–1.2L
Land Use/Land Cover	Deciduous forest, one maintained lawn, and wetlands
Fronts Former TVA Tract (s)	A portion of XGIR–262
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 29 – (65.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of Leatherwood Creek. The land cover of the majority of this parcel is deciduous forest with forested and scrub-shrub wetlands occurring along the shoreline fringe. The parcel is accessible through public roads. The parcel provides multiple dispersed recreational opportunities including camping along the reservoir shoreline.

Historically, this parcel has received extensive all-terrain vehicle (ATV) use, which is not permissible on TVA land. The parcel also provides beneficial habitat for upland game, as well as a diversity of wetland wildlife species. Bald eagles have historically nested within this parcel. There is a high probability of the presence of cultural resources on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-29. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	83
Stream Mile and Bank	TRMs 73.4–73.7R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Hunting, bank fishing, swimming, picnicking, camping
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Dispersed Recreation impacts mitigation • Conduct Limits of Acceptable Change analysis on dispersed recreation impacts
Potential Partners	None identified

Parcel 30 – (18.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River and extends between TVA markers 83–92 to 116–50. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest with one small area of unauthorized clearing. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered.

Table 4-30. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston and Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	83 and 116
Stream Mile and Bank	TRMs 74–75R
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–263 and a portion of XGIR–303
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None identified

Parcel 31 – (4.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located approximately one mile upstream of Leatherwood Creek and along the right descending bank of the Tennessee River. The land cover of the majority of the parcel is younger age deciduous forest, with forested wetlands occurring along the shoreline fringe. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. The parcel is accessible by boat only; therefore, public use is limited. There is a low probability of the presence of cultural resources on this parcel, and no federally or state-listed species are known to be present. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-31. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	116
Stream Mile and Bank	TRM 74.8R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 32 – (37.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of both the Tennessee River and Hurricane Creek extending between TVA markers 116–51 to 119–44. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Hurricane Creek and Sunset Point subdivisions are located on the backlying private property. Water use facilities have been constructed along a portion of the shoreline, and future requests for private water use facilities would be considered.

Table 4-32. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	116 and 119
Stream Mile and Bank	TRMs 75–76.1R Hurricane Creek Miles 0–0.6R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–303, XGIR–304, XGIR–305, and XGIR–306
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to Meriwether–Lewis Electric Cooperative for electric utilities

Parcel 33 – (2.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the right descending bank of Hurricane Creek. This parcel consists of significant forested wetlands and is accessible by boat only. Opportunity for dispersed recreation is limited due to the small size of the parcel, limited access, and proximity to residential development. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. There is a moderate probability of the presence of cultural resources on this parcel. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-33. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	119
Stream Mile and Bank	TRM 75.8R
Land Use/Land Cover	Forested wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 34 – (29.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel contains two noncontiguous tracts of land located along the right descending bank of Hurricane Creek extending between TVA markers 119–3 to 119–46 and TVA markers 119–47 to 119–48. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, a large wetland fronts most of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-34. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	119
Stream Mile and Bank	Hurricane Creek Miles 0.8–1.8R
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	XGIR–307 and XGIR–308
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None identified

Parcel 35 – (43.2 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along Hurricane Creek and is comprised of two separate tracts of land. Significant, high quality forested and scrub-shrub wetlands exist on the entire parcel. In 2008, a dispersed recreation impact analysis was conducted with one moderately impacted dispersed use site identified in the upper end of the parcel. Historically, this parcel has received extensive unauthorized ATV use. Public access is available through public roads. The parcel provides beneficial habitat for several bottomland forest game animals, as well as a diversity of wetland wildlife species. There is a high probability for the presence of cultural resources, and no federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-35. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	119
Stream Mile and Bank	TRM 76.0R
Land Use/Land Cover	Deciduous forest and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Hunting and camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Mitigate dispersed recreation impacts • Implement wetland protection measures
Potential Partners	None identified

Parcel 36 – (160.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located immediately upstream of Hurricane Creek. The land cover of the majority of this parcel is younger age deciduous forest and forested and scrub-shrub wetlands occurring along the shoreline fringe. The parcel is accessible by boat only; therefore, public use is limited. There is a low probability of the presence of cultural resources on this parcel, and no federally

or state-listed species are known to be present. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-36. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	119
Stream Mile and Bank	TRMs 76.1–77.2R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along the parcel boundary and shoreline
Potential Partners	None identified

Parcel 37 – (44.3 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is comprised of deciduous forest and located near the area of Danville, Tennessee. With limited site disturbance, this parcel could be considered for future industrial development. There is a moderate probability for the presence of cultural resources. Although no known endangered and threatened species have been historically found on the parcel, a site-specific environmental review will be conducted prior to new ground disturbance. Requests for use of TVA land and associated water–based structures to support industrial purposes would be considered.

Table 4-37. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	119 and 120
Stream Mile and Bank	TRM 77.3R
Land Use/Land Cover	Deciduous forest
Current Agreements/Commitments	Revocable license to Meriwether–Lewis Electric Cooperative for electric utilities

Parcel 38 – (83.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located slightly upstream of Cane Creek. A small portion of this parcel is under a revocable license to support electric utilities. The land cover of the majority of this parcel is younger age deciduous forest and forested and scrub-shrub wetlands occurring along the shoreline fringe. The parcel is accessible through public roads and is adjacent to Danville Landing recreation area/Houston County Park and Danville Ferry. The parcel is currently used for hunting, fishing, camping, and picnicking. In 2008, a dispersed recreation impact analysis was conducted. The results of the analysis included two moderately impacted dispersed use sites along the shoreline on the upper portion of this parcel. These sites are considered as candidates for future impacts mitigation projects. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-38. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	120 and 120–1
Stream Mile and Bank	TRMs 77.6–78.2R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Hunting, bank fishing, picnicking, and camping
Current Agreements/Commitments	Revocable License to Meriwether–Lewis Electric Cooperative for electric utilities
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Mitigate dispersed recreation impacts
Potential Partners	None identified

Parcel 39 – (71.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located at the mouth of Cane Creek and is adjacent to TSR 147. The parcel is under a 30-year easement (Tract No. XTGIR-909) to Houston County, Tennessee for public

recreation. The easement includes a small area on the northern end of the parcel to accommodate future development of a ferry landing. Current facilities include a boat launching ramp, picnic area, small campground, and fishing pier.

Houston County plans to expand the recreation facilities to include a nature trail, restrooms, additional camping and picnic facilities, and other recreation amenities. There is a moderate probability for the presence of cultural resources in the undeveloped areas. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-39. Parcel Information

Location Component	Parcel Specific Information
County, State	Houston, Tennessee
TVA D–Stage Map Numbers	120
Stream Mile and Bank	TRM 78R

Parcel 40 – (11.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts located along the right descending bank of Cane Creek. Private property previously owned by Louisville and Nashville Railroad Company separates these two tracts. This entire parcel lies entirely below the 375-foot msl, and the current land use is scrub-shrub and maintained lawns. CC Auto Sales and Southernaire Resort subdivisions are located on the backlying private property. Water use facilities have been constructed along a portion of the shoreline, and future requests for private water use facilities would be considered.

Table 4-40. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	120
Stream Mile and Bank	Cane Creek Miles 0.6–1.4R
Land Use/Land Cover	Maintained lawns and scrub-shrub
Fronts Former TVA Tract (s)	XGIR–316, XGIR–317, XGIR–318, and XTGIR–89
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 41 – (4.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is a small linear tract of land located adjacent to Cane Creek in the area of Danville, Tennessee. This parcel contains a portion of the ROW for TSR 147. Requests for private water use facilities would not be considered.

Table 4-41. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	120
Stream Mile and Bank	Cane Creek Mile 1R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 42 – (12.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is comprised of three distinct tracts of land and located along the right descending bank of Cane Creek. A railroad separates a portion of this parcel from the water. The land cover of this parcel is predominantly deciduous forest. The parcel is accessible through public roads; however, small size of the parcel and proximity to development results in limited public use. There is a moderate probability of the presence of cultural resources on this parcel; however, the area has not been surveyed. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-42. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	120
Stream Mile and Bank	TRM 78.0R

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 43 – (5.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along Cane Creek and south of TSR 147. The parcel is under a revocable license to Southernaire Marina and supports a marina facility and boat ramp. The undeveloped portions of this parcel have a high probability for cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-43. Parcel Information

Location Component	Parcel Specific Information
County, State	Houston, Tennessee
TVA D–Stage Map Numbers	120
Stream Mile and Bank	TRM 78.3R

Parcel 44 – (61.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the uppermost end of the Cane Creek embayment and includes land adjacent to the Houston County Airport. Wetlands are also present on the parcel and along the shoreline. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-44. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	120
Stream Mile and Bank	Cane Creek Mile 1.8B
Land Use/Land Cover	Grassland and wetlands

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license to Houston County, Tennessee, for an airplane landing strip
Potential Projects	None identified
Potential Partners	Houston County, Tennessee

Parcel 45 – (12.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Cane Creek extending between TVA markers 120–97 to 120–30. This parcel lies entirely below the 375-foot msl, and the current land use is agriculture and wetlands. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, a large wetland encompasses most of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-45. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	120
Stream Mile and Bank	Cane Creek Mile 1.7L
Land Use/Land Cover	Agriculture and wetlands
Fronts Former TVA Tract (s)	XGIR–321
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None identified

Parcel 46 – (60.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of Cane Creek. Much of this parcel is prime farmland, and a 30-acre portion is currently under a term agricultural license for perennial hay. In addition, a small portion of this parcel is under a linear revocable license to support electric utilities. The parcel provides beneficial habitat for several upland game animals, as well as a diversity of wetland wildlife species. There are significant fringe shoreline wetlands present

on portions of the parcel. In addition, there is a high probability of the presence of cultural resources; however, the area has not been surveyed. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-46. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	120
Stream Mile and Bank	TRMs 78.3–78.7R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Limited hunting
Current Agreements/Commitments	• Term agricultural license for perennial hay • Revocable license to Meriwether–Lewis Electric Cooperative for electric utilities
Potential Projects	Native warm season grass conservation and management for wildlife habitat enhancement
Potential Partners	None identified

Parcel 47 – (54.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Cane Creek and extends between TVA markers 120–35 and 120–39. The land cover of this parcel is mostly forest. A portion of this parcel is under a revocable license to Cane Creek Dock for commercial recreation use. Current facilities include a marina, boat ramp, and campground. Additional portions of this parcel could potentially be made available for expansion of commercial recreation facilities and services. Wetlands occur along a portion of the shoreline, and the undeveloped area has a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered. Potential impacts to cultural resources, wetlands, or other resources and any resulting mitigation from proposed recreational development would be evaluated during a site-specific environmental review.

Table 4-47. Parcel Information

Location Component	Parcel Specific Information
County, State	Houston, Tennessee
TVA D–Stage Map Numbers	120
Stream Mile and Bank	TRM 78.3R

Parcel 48 – (82.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of Cane Creek. The land cover of this parcel is predominantly deciduous forest. The parcel provides beneficial habitat for several upland game animals, as well as a diversity of wetland wildlife species. Access is limited to the majority of this parcel. Historically, this parcel has received extensive ATV use, which is not permissible on TVA land. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-48. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	120
Stream Mile and Bank	TRMs 78.5–78.8R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Mitigate ATV use impacts
Potential Partners	None identified

Parcel 49 – (21.9 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel is located directly upstream of Cane Creek. The land cover of this parcel is predominantly deciduous forest. The parcel provides beneficial habitat for several upland game

animals, as well as a diversity of wetland wildlife species. Access is limited to the majority of this parcel. Historically, this parcel has received extensive ATV use, which is not permissible on TVA land. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-49. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	120
Stream Mile and Bank	TRMs 78.8–79.1R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Mitigate ATV use impacts
Potential Partners	None identified

Parcel 50 – (304.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is located between Cane Creek and White Oak Creek. The land cover of this parcel is predominantly deciduous forest. The parcel provides beneficial habitat for several upland game animals, as well as a diversity of wetland wildlife species. Access is limited to the majority of this parcel. Historically, this parcel has received extensive ATV use, which is not permissible on TVA land. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. When TVA acquired this property, three cemeteries were present: Andrews, Akers, and Irish. No federally or state-listed species are known to occur on this parcel; however, the federally delisted but still monitored bald eagle has nested here in the past. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-50. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	120 and 122
Stream Mile and Bank	TRMs 79.1–81.1R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Mitigate ATV use impacts
Potential Partners	None identified

Parcel 51 – (25.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three noncontiguous tracts of land located along the right descending bank of White Oak Creek. The three tracts extend among TVA markers 122–38 to 122–37; 122–36 to 122–34; and 122–33 to 123–48. One bald eagle nest occurs within 660 feet of one of these tracts. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered.

Table 4-51. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	122 and 123
Stream Mile and Bank	White Oak Creek Miles 0.2–1.9R
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–322, XGIR–323, XGIR–324, and XGIR–325
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None identified

Parcel 52 – (6.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is comprised of two tracts of land that are separated by Parcel 51 and is located along the right descending bank of White Oak Creek. The land cover of this parcel is predominantly deciduous forest. The parcel is accessible through public roads; however, because of their small size and proximity to potential residential development, public use of this area is very limited. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed for cultural resources. No federally or state-listed species are known to occur on this parcel; however, bald eagles have nested on the nearby private land in the past. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-52. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	122
Stream Mile and Bank	TRM 80.8R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 53 – (7.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is located along White Oak Creek, and TVA conveyed the backlying property (Tract No. XTGIR-100E) to the State of Tennessee for public recreation. A public boat ramp and parking lot is maintained by the TWRA. Boundaries of the parcel extend between TVA markers 123–47 and 123–48. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-53. Parcel Information

Location Component	Parcel Specific Information
County, State	Houston, Tennessee
TVA D–Stage Map Numbers	123
Stream Mile and Bank	TRM 82R

Parcel 54 – (35.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land located along the right descending bank of White Oak Creek. The three tracts extend among TVA markers 123–47 to 123–7 and 123–24 to 123–15. This parcel lies entirely below the 375-foot msl, and the current land cover is wetlands. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, high quality wetlands encompass and front the entirety of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-54. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	123
Stream Mile and Bank	White Oak Creek Mile 2R
Land Use/Land Cover	Wetlands
Fronts Former TVA Tract (s)	XGIR–326, XGIR–327, XGIR–328, and XGIR–329
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to Meriwether–Lewis Electric Cooperative for a transmission line

Parcel 55 – (6.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the right descending bank of White Oak Creek. The land cover of this parcel is predominantly forested wetlands. The parcel is accessible through public roads; however, because of its small size and proximity to potential residential development, public use of this area is very limited. Historically, embankment plantings were established on portions of this parcel. This parcel has received extensive unauthorized ATV use. There is a

moderate probability for the presence of cultural resources, but the area has not been surveyed. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-55. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	123
Stream Mile and Bank	TRM 80.5R
Land Use/Land Cover	Forested wetlands and historic hardwood tree plantings
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Wetland protection • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Mitigate ATV impacts • Embankment planting research
Potential Partners	None identified

Parcel 56 – (103.8 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along the upper end of the White Oak Creek embayment. This parcel was previously converted to wetlands creating a wetland mitigation bank for the New Johnsonville Fossil Plant. There is a moderate probability of the presence of cultural resources on this parcel; however, the area has not been surveyed. No federally or state-listed species are known to occur on the parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-56. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	123
Stream Mile and Bank	TRM 81.3R

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Deciduous forest, forested wetlands, and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Wetland mitigation site for New Johnsonville Fossil Plant
Potential Projects	• Wetland protection and monitoring • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Establishment of native warm season grasses
Potential Partners	New Johnsonville Fossil Plant

Parcel 57 – (40.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is comprised of six small islands and two mainland tracts of land that are located along White Oak Creek. High quality wetlands cover the islands. The mainland tracts of land are under consideration for native warm season grass plantings or possibly a carbon sequestration project. There is a low probability of the presence of cultural resources on this parcel, and no federally or state-listed species are known to be present. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-57. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	123
Stream Mile and Bank	TRM 81.3R
Land Use/Land Cover	Forested wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Establishment of native warm season grasses • Carbon sequestration project
Potential Partners	None identified

Parcel 58 – (36.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land located along the right descending bank of White Oak Creek. This parcel lies entirely below the 375-foot msl, and the current land cover is high quality wetlands. The parcel is also located adjacent to a wetland mitigation area. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, water use facilities will be limited to in size and nature due to the presence of high-quality wetlands and proximity of the wetland mitigation area. If approved, water use facilities would be constructed in a manner to avoid the wetland mitigation area. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-58. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	123
Stream Mile and Bank	White Oak Creek Mile 2R
Land Use/Land Cover	Wetlands
Fronts Former TVA Tract (s)	XGIR–326, XGIR–327, XGIR–328, a portion of XGIR–330, XGIR–331, and XGIR–332
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None identified

Parcel 59 – (8.0 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel is comprised of four islands that are located in the upper end of White Oak Creek embayment. While the majority of the parcel is predominantly deciduous forest, significant wetlands exist. These wetlands provide many functions, including habitat for a diversity of wildlife species. The parcel is accessible by boat only; therefore, public use is limited. However, it is expected that hunting occurs on these islands. There is a low probability for the presence of cultural resources, but the area has not been surveyed. No federally listed species are known to occur on the parcel. However, the state-listed alligator snapping turtle has

been found on one of the islands. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-59. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	123
Stream Mile and Bank	TRM 81.3R
Land Use/Land Cover	Bottomland forested wetlands
Known Dispersed Recreation Opportunities	Limited Hunting
Current Agreements/Commitments	None identified
Potential Projects	Wetland and habitat protection
Potential Partners	None identified

Parcel 60 – (71.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of White Oak Creek extending between TVA markers 123–38 to 124–7. This parcel lies entirely below the 375-foot msl, and the current land cover is wetlands. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, high quality wetlands encompass and front the entirety of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-60. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	123
Stream Mile and Bank	White Oak Creek Miles 2.2–3L
Land Use/Land Cover	Wetlands
Fronts Former TVA Tract (s)	XGIR–333, XGIR–334, and a portion of XGIR–335
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to Meriwether–Lewis Electric Cooperative for electric utilities

Parcel 61 – (16.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is comprised of two distinct tracts of land that are located along the left descending bank of White Oak Creek. The land cover of this parcel is predominantly deciduous forest, and public access is limited to the majority of this land. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No federally or state-listed species are known to be present on this parcel. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-61. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	123
Stream Mile and Bank	TRM 81.7R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along the parcel boundary and shoreline
Potential Partners	None identified

Parcel 62 – (7.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the left descending bank of White Oak Creek. This parcel lies entirely below the 375-foot msl, and the current land use is a maintained lawn and wetlands. Shamrock Club subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. However, a wetland fronts a portion of the parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-62. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	123 and 125
Stream Mile and Bank	White Oak Creek Mile 1.5–2LL
Land Use/Land Cover	Maintained lawn and wetlands
Fronts Former TVA Tract (s)	A portion of XGIR–335
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 63 – (11.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the left descending bank of White Oak Creek. The land cover of the majority of this parcel is younger age deciduous forest with forested and scrub-shrub wetlands occurring along the shoreline fringe. The parcel is accessible through public roads; however, the small size and proximity to residential develop limits public use of this area. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. There is a moderate probability of the presence of cultural resources on this parcel; however, the area has not been surveyed. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-63. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	123 and 125
Stream Mile and Bank	TRM 81.8R
Land Use/Land Cover	Mixture of deciduous forest and forested scrub-shrub wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 64 – (11.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of a large tract of land and is located along the left descending bank of White Oak Creek and the right descending bank of the Tennessee River. The parcel extends between TVA markers 125–45 to 128–22. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Beechwood Hills and Timberlake Village subdivisions and TVA–developed White Oak Creek Cabin Sites are located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4-64. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston and Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW and 30–NW
TVA D–Stage Map Numbers	125
Stream Mile and Bank	White Oak Creek Miles 0–1.4L TRMs 82–83.1R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–5, XGIR–336, XGIR–337, XGIR–338, and XGIR–339
Structure Profile	Varies
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to Houston County, Tennessee for a boat landing – the boat landing has not been constructed • Permanent easement to Houston County, Tennessee for a roadway • Permanent easement to Humphreys, County, Tennessee for a roadway

Parcel 65 – (19.5 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is an island that is located in the main reservoir near the mouth of Greenbrier Creek. The land cover of this parcel is predominantly forested wetlands and provides habitat for a variety of wetland wildlife species. The parcel is accessible by boat only; therefore, public use is limited. There is a high probability for the presence of cultural resources. No federally or state–listed as endangered, threatened or special status species are known to occur on this parcel.

No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-65. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	125 and 128
Stream Mile and Bank	TRM 83.0B
Land Use/Land Cover	Forested wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Assess shoreline stabilization needs
Potential Partners	None identified

Parcel 66 – (24.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is comprised of two distinct tracts of land and is located at the mouth of Greenbrier Creek. The majority of this parcel consists of high quality forested wetland and provides habitat for a variety of wetland wildlife species. The parcel is accessible through public roads. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. There is a high probability for the presence of cultural resources; however, the area has not been surveyed. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-66. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	128
Stream Mile and Bank	TRM 83.2R
Land Use/Land Cover	Forested wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 67 – (3.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of a small tract of land and is located along the right descending bank of the Tennessee River. The parcel extends between TVA markers 128–23 to 128–24. This parcel lies entirely below the 375-foot msl, and the current land cover is wetlands. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, high quality wetlands encompass and front the entirety of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-67. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	128
Stream Mile and Bank	TRM 83.2R
Land Use/Land Cover	Wetlands
Fronts Former TVA Tract (s)	A portion of XGIR–340
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to Meriwether–Lewis Electric Cooperative for a transmission line

Parcel 68 – (103.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of a long and narrow tract of land and is located along the right descending banks of the Tennessee River and Turkey Creek. The parcel extends between TVA markers 128–25 to 129–20. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest and wetlands. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. However, high quality wetlands are located in Turkey Creek. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-68. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	128 and 129
Stream Mile and Bank	TRMs 83.3–85.5R Turkey Creek Miles 0–1.2R
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	A portion of XGIR–340, XGIR–341, XGIR–342, XGIR–343, XGIR–344, XGIR–345, and XGIR–547
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable licenses to Meriwether–Lewis Electric Cooperative for electric utilities and a transmission line

Parcel 69 – (1.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small island parcel is located at the mouth of Turkey Creek. The land cover is predominantly forested wetlands, which provides habitat for a variety of wetland species. The parcel is accessible by boat only; therefore public use is limited, although some waterfowl hunting may occur. There is a moderate probability of the presence of cultural resources on this parcel. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-69. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	129
Stream Mile and Bank	TRM 85.5B
Land Use/Land Cover	Forested wetlands
Known Dispersed Recreation Opportunities	Limited Hunting
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 70 – (13.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located at the upper end of the Turkey Creek embayment. The majority of this parcel consists of younger age deciduous forest with forested and scrub-shrub wetlands occurring along the shoreline fringe. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. The parcel is accessible through public roads. There is a moderate probability of the presence of cultural resources on this parcel; however, the area has not been surveyed. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-70. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	129
Stream Mile and Bank	TRM 85.6R
Land Use/Land Cover	Mixture of deciduous forest and forested scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 71 – (13.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This small parcel is located along the left descending bank the Turkey Creek and extends between TVA markers 133–3 to 129–50. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest and wetlands. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, high quality wetlands encompass the entirety of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-71. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	129
Stream Mile and Bank	Turkey Creek Mile 1R
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	A portion of XGIR–346
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to Meriwether–Lewis Electric Cooperative for a transmission line

Parcel 72 – (21.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along Turkey Creek. This area is under a revocable license for commercial recreation and is managed as a component of Eagle Bay Marina. Current facilities include a marina, boat ramp, and swimming beach. The less developed portions of the parcel have a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-72. Parcel Information

Location Component	Parcel Specific Information
County, State	Humphreys, Tennessee
TVA D–Stage Map Numbers	129
Stream Mile and Bank	TRM 85.8R

Parcel 73 – (69.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This linear parcel is located along the right descending banks of the Tennessee River and Big Richland Creek. This parcel extends between Parcel 72 and TVA marker 133–38. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest, maintained lawns, and road ROW. A bald eagle nesting record occurs within 660 feet of this parcel. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4-73. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	129 and 133
Stream Mile and Bank	TRMs 85.9–88.3R Big Richland Creek Miles 0–1.2R
Land Use/Land Cover	Deciduous forest, maintained lawns, and road right–of–way
Fronts Former TVA Tract (s)	A portion of XGIR–346, XGIR–347, XGIR–348, XGIR–349, XGIR–350, XGIR–351, XGIR–352, XGIR–353, XGIR–354, and a portion of XGIR–355
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Revocable licenses to Meriwether–Lewis Electric Cooperative for electric utilities • Revocable license to Southern Bell Telephone and Telegraph Company for a telephone line

Parcel 74 – (11.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along Richland Creek and can be accessed by Clyde Road. This parcel is under a lease agreement (XGIR–936L) for commercial recreation and is managed as part of Mason's Dock. Facilities provided at this area include a marina, boat ramp, campground, rental cabins, restaurant, and play equipment. The area has a low probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-74. Parcel Information

Location Component	Parcel Specific Information
County, State	Humphreys, Tennessee
TVA D–Stage Map Numbers	133
Stream Mile and Bank	TRM 88.3R

Parcel 75 – (94.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Big Richland Creek and extends approximately 200 feet southwest of TVA marker 133–37 to TVA marker 134–17. This parcel

lies entirely below the 375-foot msl, and the current land cover is deciduous forest and wetlands. Approximately five water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. However, high quality wetlands encompass and front the entirety of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-75. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW and 30–NE
TVA D–Stage Map Numbers	134
Stream Mile and Bank	Big Richland Creek Miles 1.3–2.7R
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	A portion of XGIR–346, XGIR–347, XGIR–348, XGIR–349, XGIR–350, XGIR–351, XGIR–352, XGIR–353, XGIR–354, XGIR–356, and XGIR–357
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Revocable licenses to Meriwether–Lewis Electric Cooperative for electric utilities and a transmission line • Revocable license to Southern Bell Telephone and Telegraph Company for a telephone line

Parcel 76 – (11.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is comprised of multiple small islands within Big Richland Creek. Also included in the parcel is a portion of the peninsula along the left descending bank near the mouth of the creek. This parcel is accessible by boat; however, some islands could be accessible by land during the winter months. The majority of the islands are comprised of forested wetlands with scrub-shrub wetlands occurring along the shoreline fringe. These wetlands provide habitat for a variety of wetland and riparian shoreline wildlife species. There is a low probability of the presence of cultural resources in this area. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-76. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	134 and 135
Stream Mile and Bank	TRM 88.5B
Land Use/Land Cover	Mixture of forested and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 77 – (32.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located at the upper end of the Big Richland Creek embayment. The land cover for the majority of this parcel is younger age deciduous forest, with forested wetlands occurring along the shoreline fringe. Access is limited to the majority of this parcel. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. There is a moderate probability for the presence of cultural resources on this parcel; however, the area has not been surveyed. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-77. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	134
Stream Mile and Bank	TRM 88.0R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 78 – (105.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Big Richland Creek and extends between TVA markers 134–18 to 135–28. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest, maintained lawns, and wetlands. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. However, high quality wetlands encompass a large portion of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-78. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW and 30–NE
TVA D–Stage Map Numbers	134 and 135
Stream Mile and Bank	Big Richland Creek Miles 0.5–3.1L
Land Use/Land Cover	Deciduous forest, maintained lawns, and wetlands
Fronts Former TVA Tract (s)	XGIR–358, XGIR–359, XGIR–360, and XGIR–565
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Revocable license to Humphreys County, Tennessee for a roadway • Revocable license to South Central Bell for a telephone line

Parcel 79 – (28.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the left descending bank of Big Richland Creek. Much of this parcel is prime farmland, and a seven–acre portion is under a term agricultural license for perennial hay. In addition, a small portion of this tract is under a linear revocable license to support electric utilities. Access is limited to the majority of this parcel. Historically, this parcel has received extensive unauthorized ATV use. There is a moderate probability for the presence of cultural resources on this parcel; however, the area has not been surveyed. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-79. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	135
Stream Mile and Bank	TRMs 89.0–89.5R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	• Term agricultural license for perennial hay • Revocable license to Meriwether–Lewis Electric Cooperative for electric utilities
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Mitigate ATV usage impacts • Establishment of native warm season grasses
Potential Partners	None identified

Parcel 80 – (66.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River and extends between TVA markers 135–29 to 135–36. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest, maintained lawns, and wetlands. Richland Harbors Subdivision is located on a portion of the backyling private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Wetlands encompass a small portion of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-80. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	135
Stream Mile and Bank	TRMs 88.8–90R
Land Use/Land Cover	Deciduous forest, maintained lawns, and wetlands
Fronts Former TVA Tract (s)	XGIR–7, XGIR–361, XGIR–362, XGIR–363, and XGIR–364

Location Component and Public Involvement Opportunities	Parcel Specific Information
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable licenses to Meriwether–Lewis Electric Cooperative for electric utilities

Parcel 81 – (1,033.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is located left descending bank of Big Richland Creek and extends south along the right descending bank to the mouth of Dry Creek. Several islands are also considered part of this parcel. This parcel is under the Bear Creek Management Unit Plan (TVA 2002). Access improvements have been made on the south end of the parcel. Investments in the road network facilitated forest management activities. Historically, pine stand thinning was conducted and an oak understory planting occurred. This parcel provides beneficial habitat for wild turkey (*Meleagris gallopavo*) and other upland game species. The northern half of this parcel has a moderate probability for the presence of cultural resources, but the area has not been surveyed. The southern half of this parcel has a high probability for the presence of cultural resources. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-81. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW and 30–SW
TVA D–Stage Map Numbers	135, 137, and 139
Stream Mile and Bank	TRMs 90.0–93.7R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Hunting, wildlife observation, camping, and fishing
Current Agreements/Commitments	Revocable License to Meriwether Lewis Electric Cooperative for electric Utilities
Potential Projects	• Prescribed burning • Enhanced management for wild turkey habitat • Forest management associated with wildlife habitat enhancement • Other projects addressed in the Bear Creek Unit Plan

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Partners	• Tennessee Wildlife Resources Agency • Tennessee Division of Forestry • National Wild Turkey Federation

Parcel 82 – (27.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is adjacent to Tract No. XTGIR-103 that has been transferred to the State of Tennessee for public recreation. Bear Creek Road provides access to the parcel. TWRA has developed a boat ramp and parking lot on the southern end of this parcel. The remainder of the parcel is undeveloped and forested. There is a high probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-82. Parcel Information

Location Component	Parcel Specific Information
County, State	Humphreys, Tennessee
TVA D–Stage Map Numbers	139
Stream Mile and Bank	TRM 92R

Parcel 83 – (10.0 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel consists of several small islands that are located near the mouth of Dry Creek. The majority of the islands consist of predominantly bottomland hardwood forest with significant, high quality wetlands along the shoreline. These islands provide habitat and nesting opportunities for waterfowl, wading birds, shorebirds and raptors. The parcel is accessible by boat only; therefore, public use is limited. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No federally or state-listed species are known to occur on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-83. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton and Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	139
Stream Mile and Bank	TRMs 92.7–95R
Land Use/Land Cover	Bottomland hardwood forest
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	Assess shoreline for stabilization needs
Potential Partners	None identified

Parcel 84 – (138.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River and extends among TVA marker 13–18 to Lot 55 of Dry Creek Subdivision; Lot 54 of Dry Creek Subdivision to TVA marker 140–7; opposite bank of TVA marker 140–7 to TVA marker 140–12. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest, maintained lawns, and wetlands. TVA–developed Dry Creek Subdivision is located on a portion of the backyling private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Wetlands encompass a small portion of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-84. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	139 and 140
Stream Mile and Bank	TRMs 93.2–94R
Land Use/Land Cover	Deciduous forest, maintained lawns, and wetlands
Fronts Former TVA Tract (s)	XGIR–6, XGIR–302, XGIR–365, and XGIR–559
Structure Profile	Elevation 381–foot mean sea level

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to Meriwether–Lewis Electric Cooperative for electric utilities • Revocable license to Southern Bell Telephone and Telegraph Company for a telephone line

Parcel 85 – (31.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is comprised of one mainland tract of land located within Little Dry Creek. Access is limited to the majority of this parcel; therefore, public use is limited. The land cover of this parcel is predominantly deciduous forest with significant, high quality wetlands existing along the shoreline. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No federally or state-listed species are known to be present. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-85. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	140
Stream Mile and Bank	TRM 94.3
Land Use/Land Cover	Mixture of deciduous forest and forested scrub-shrub wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Wildlife Habitat Council project implementation • Install wood duck boxes
Potential Partners	Wildlife Habitat Council partnership with adjacent industries

Parcel 86 – (0.5 acre)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is comprised of two small islands located at the confluence of Little Dry Creek and the Tennessee River. The land cover of this parcel is predominantly deciduous forest with

significant, high quality wetlands existing along the shoreline. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No federally or state-listed species are known to be present. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-86. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	140
Stream Mile and Bank	TRM 94.3
Land Use/Land Cover	Mixture of deciduous forest and forested scrub-shrub wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Wildlife Habitat Council project implementation • Install wood duck boxes
Potential Partners	Wildlife Habitat Council partnership with adjacent industries

---

Parcel 87 – (155.5 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel consists of a large noncontiguous tract of land lying along the right descending bank between TRMs 94.2 and 96. Most of this parcel fronts two industrial sites, Inland Container Corporation and Consolidated Aluminum Corporation. However, there is some backlying private property that could be considered for future industrial development. This undeveloped property along with the adjacent TVA land is deciduous forest. The undeveloped property has a moderate probability for cultural resources, but only a portion has been surveyed. At least three historic cemeteries are present on the backlying private property. Requests for use of TVA lands and associated water–based structures to support industrial purposes would be considered.

Table 4-87. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	140 and 143A
Stream Mile and Bank	TRMs 94.2–96R

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Road and transmission line rights–of–way, industrial, and deciduous forest
Current Agreements/Commitments	Permanent easement to Inland Container Corporation for industrial purposes

Parcel 88 – (175.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the right descending bank of Trace Creek. Access is limited to the majority of this parcel; therefore, public use is limited. The land cover of this parcel is predominantly deciduous forest. Habitat for upland game is present, and some hunting has occurred on this parcel. Historically, this parcel has received extensive unauthorized ATV use. There is a low probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-88. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	144
Stream Mile and Bank	TRM 96.3
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Mitigate ATV usage impacts • Manage habitat for wildlife diversity through selective timber harvests
Potential Partners	None identified

Parcel 89 – (409.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This large parcel is located at the upper end of Trace Creek embayment and is adjacent to Johnsonville State Historic Park. Access to this parcel is available through the adjacent state

park. The land cover of a majority of the parcel is predominantly bottomland hardwood forest with significant, high quality wetlands along the shoreline. Historically, 78 acres of this parcel was in a revocable license for agricultural use for row crops, and this land remains in an open condition. This parcel provides habitat for many game species providing hunting opportunities for the public. This parcel has received extensive unauthorized ATV use in the past. There is a high probability for the presence of cultural resources. No federally listed as endangered, threatened or special status species are known to occur on this parcel. However, records for two state-listed species, northern pine snake (*Pituophis melanoleucus melanoleucus*) and western pygmy rattlesnake (*Sistrurus miliarius streckeri)*, have been identified on the northwest portion of the parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-89. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	143 and 144
Stream Mile and Bank	TRMs 96.3–97.0R
Land Use/Land Cover	Deciduous forest, forested wetlands, scrub-shrub wetlands, and open agricultural land
Known Dispersed Recreation Opportunities	Hunting, camping, and wildlife observation
Current Agreements/Commitments	Revocable license to Meriwether–Lewis Electric Cooperative for electric Utilities
Potential Projects	• Explore options for multi–use trails on upland portions of the parcel • Managing transmission line right–of–way for wildlife habitat enhancements • Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Mitigate All Terrain Vehicle usage impacts • Establish native warm season grasses and legumes on former agricultural license area

Parcel 90 – (525.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located near the community of New Johnsonville and extends along Trace Creek. The bulk of the parcel is under a revocable license to the State of Tennessee and is managed as a part of Johnsonville State Historic Park. Management emphasis is on the protection and

interpretation of historical and cultural features. Visitor accommodations include an interpretive center, museum, picnic facilities and trails.

The northeastern section of this parcel is under lease (Tract No. XGIR-931L) to Pebble Isle Marina for commercial recreation purposes. Facilities at this area include a marina, campground, restaurant, and boat ramp. In the non–commercially developed area, there is a high probability for cultural resources. Further development of the historic park will require evaluation of ground disturbing activities. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-90. Parcel Information

Location Component	Parcel Specific Information
County, State	Humphreys, Tennessee
TVA D–Stage Map Numbers	143A
Stream Mile and Bank	TRM 97R

Parcel 91 – (0.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is an island located upstream of Trace Creek. The parcel is accessible by boat only; therefore, public use is limited. The land cover of this parcel is predominantly deciduous forest with fringe wetlands along the shoreline. There is a low probability for the presence of cultural resources. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-91. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	149
Stream Mile and Bank	TRM 98.9R
Land Use/Land Cover	Mixture of deciduous forest and wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 92 – (4.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located adjacent to the Johnsonville Fossil Plant reservation and contains a portion of the ROW for US Route 70 and TSR 1. Requests for private water use facilities would not be considered.

Table 4-92. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	149 and 155
Stream Mile and Bank	TRM 100.6R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Permanent easement to Tennessee Department of Transportation for a highway
Potential Projects	None identified
Potential Partners	Tennessee Department of Transportation

Parcel 93 – (3.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located near US Route 70 and includes two separate recreation areas. The northern portion of the parcel, which is immediately adjacent to the highway, has been licensed to TWRA for public recreation. This area includes a boat ramp and parking lot. The southern (upstream) portion of the parcel has been licensed for commercial recreation to Anchor Harbor Marina. Current facilities include a campground, boat ramp, and boat slips. There is a low probability for the presence of cultural resources in this parcel. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-93. Parcel Information

Location Component	Parcel Specific Information
County, State	Humphreys, Tennessee
TVA D–Stage Map Numbers	149
Stream Mile and Bank	TRM 100.6R

Parcel 94 – (18.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River and extends between TVA markers 1 and 2 as noted on TVA's Land Sale Map 08MS421A552–155. This parcel lies entirely below the 375-foot msl, and the current land use is maintained lawns and wetlands. New Johnsonville Subdivision is located on the backyling private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Wetlands encompass a small portion of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-94. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	155
Stream Mile and Bank	TRM 100.6R
Land Use/Land Cover	Maintained lawns and wetlands
Fronts Former TVA Tract (s)	XGIR–200
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 95 – (36.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along Indian Creek and has been developed for public recreation by the Town of New Johnsonville. This parcel is under a recreation easement agreement (Tract No. XTGIR-121RE). Park facilities include ball fields, restrooms, trails, and picnic sites. The undeveloped area has a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-95. Parcel Information

Location Component	Parcel Specific Information
County, State	Humphreys, Tennessee
TVA D–Stage Map Numbers	155
Stream Mile and Bank	TRM 101R

Parcel 96 – (43.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is comprised of three small islands and a small tract on the mainland. This parcel is located slightly upstream of Johnsonville Fossil Plant. The land cover for a majority of this parcel is high quality forested and scrub-shrub wetlands. A permanent easement for a public road exists on the eastern boundary of the mainland tract. Access to the parcel is available by this road. In addition, a navigation first class landing fronts one of islands at TRM 101.0R. There is a high probability for the presence of cultural resources, but only a portion of the area has been surveyed. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-96. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	155
Stream Mile and Bank	TRM 100.7R
Land Use/Land Cover	Mixture forested and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Wildlife observation and hunting
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 97 – (571.0 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel consists of a large noncontiguous tract of land lying along the right descending bank between TRMs 100.6 and 104. Approximately 85 acres of this tract is encumbered with transmission line or pipeline ROWs. A portion of this parcel also fronts the Humphrey County,

Tennessee, industrial site, and the previous Vanguard Services industrial site. There is a substantial portion of this parcel, along with the backlying private property, that could be considered for future industrial development. This undeveloped property along with the adjacent TVA land is deciduous forest with a moderate to high probability for the presence of cultural resources. Significant wetlands are also present within Indian Creek. Potential impacts to these resources and any resulting mitigation from proposed industrial development would be evaluated during a site-specific environmental review. Requests for use of TVA lands and associated water–based structures to support industrial purposes would be considered.

Table 4-97. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW and 31–NW
TVA D–Stage Map Numbers	155 and 162
Stream Mile and Bank	TRMs 100.6–104R
Land Use/Land Cover	Road and transmission line rights–of–way, industrial, wetlands, and deciduous forest
Current Agreements/Commitments	• Permanent easement to the City of New Johnsonville for a roadway • Permanent easement to Humphreys County, Tennessee for an industrial site and roadway • Permanent easement to Louisville and Nashville Railroad Company for a railroad • Permanent easement to Mid–Valley Pipeline Company for a pipeline • Revocable license to the City of New Johnsonville for sewer and water lines • Revocable license to Humphreys County, Tennessee, for a roadway • Term easement to Vanguard Services for a barge terminal

Parcel 98 – (42.8 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Indian Creek, a tributary to TRM 101R, and is encumbered by six transmission line ROWs. Wetlands are also present on the parcel and along the shoreline. There is a low probability for undisturbed cultural resources in the transmission line and pipeline ROWs. Requests for private water use facilities would not be considered.

Table 4-98. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Houston, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	155
Stream Mile and Bank	Indian Creek Mile 0.7L
Land Use/Land Cover	Grassland and wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 99 – (34.2 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel contains the Tribble Woods Habitat Protection Area and is adjacent to the TNWR. The parcel is managed as a Habitat Protection Area targeting the protection of a population of short–stemmed iris (*Iris brevicaulis*), a stated–listed plant species. The iris population on this parcel occurs in the forested floodplain and requires little, if any, active management. Historically, this parcel has been used by wintering bald eagles (*Haliaeetus leucocephalus*). There is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-99. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	31–NW
TVA D–Stage Map Numbers	162
Stream Mile and Bank	TRMs 104.1–104.5R
Land Use/Land Cover	Mixture of forested and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Wildlife observation and scientific research
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands/Habitat Protection Area signs along parcel boundaries and shoreline • Monitor short–stemmed iris population • Removal of invasive exotic vegetation
Potential Partners	None identified

Parcel 100 – (46.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains the levee and pump house associated with the Duck River Dewatering Area (Sub-section 2.3.2). The backlying land is used to support the dewatering unit and is under agreement with the USFWS for the management of the TNWR. Requests for private water use facilities would not be considered.

Table 4-100. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	31–NW
TVA D–Stage Map Numbers	156, 161, 169, and 170
Stream Mile and Bank	TRMs 105–110.5R Duck River Miles–4R
Land Use/Land Cover	Pump house, levee, and shoreline fringe wetlands
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	Agreement with U.S. Fish and Wildlife Service for the establishment and management of Tennessee National Wildlife Refuge
Potential Projects	None identified
Potential Partners	U.S. Fish and Wildlife Service

Parcel 101 – (23,820.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel contains all lands considered as part of the TNWR. In 1945, President Harry S. Truman signed Executive Order 9670 establishing the TNWR. This action approved the agreement between TVA and the U.S. Department of the Interior (DOI) allowing DOI certain

management rights over approximately 27,508 acres of surface water and 23,820 acres of TVA land. The TNWR was thus established as a refuge area for migratory birds and other wildlife. Subsequently, the entire parcel is under an agreement with the USFWS for management of the refuge. The TNWR is comprised of three separate units: Duck River Unit (26,738 acres of surface water and TVA land), Big Sandy Unit (21,348 acres of surface water and TVA land), and Bussseltown Unit (3,272 acres of surface water and TVA land). The refuge contains several habitats including open reservoir waters, bottomland hardwoods, upland oak/hickory forests, freshwater marsh and, open grasslands. The diversity of habitats found on TNWR provide habitat for hundreds of species of birds, fish, reptiles, and plants. The refuge provides ample opportunities for several dispersed recreation opportunities including fishing, limited hunting, hiking, wildlife observation, photography, and camping. For more information, including a comprehensive list of species found there, please visit the TNWR's Web site at http://www.fws.gov/tennesseerefuge/. There are records of eight state-listed plant species, Fraser loosestrife (*Lysimachia fraseri*), Loessel's twayblade (*Liparis loeseli),* river bulrush (*Bolboschoenus fluviatilis)*, short-beak arrowhead (*Sagittaria brevirostra),* smaller mud-plantain (*Heteranthera limosa)*, sweetscent ladies'-tresses (*Spiranthes odorata*), sweet-scented indian-plantain (*Hasteola suaveolens*), and Walter's barnyard grass (*Echinochloa walteri*). Four state-listed wildlife species have been recorded within this parcel, Bachman's sparrow (*Peucaea aestivalis)*, bald eagle (*Haliaeetus leucocephalus)*, great egret (*Ardea alba)*, and western pigmy rattlesnake (*Sistrurus miliarius streckeri)*. In addition to natural resources, there is a high probability for the presence of cultural resources on this parcel. There are four navigation first class landings on the TNWR; they are located at TRMs 105.4L, 110.2L, 116.8L, and 131.9L.

No private shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-101. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Perry, and Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SE, 30–SW, 31–NW, and 31–SW
TVA D–Stage Map Numbers	148, 156, 157, 160, 169, 170, 179, and 189
Stream Mile and Bank	TRMs 104.5–120.3R and L, and includes portions of the Big Sandy and Duck rivers

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Open grasslands, deciduous upland forests, bottomland forests, scrub-shrub wetlands, forested wetlands, freshwater marsh and beaver ponds, managed dewatering unit areas with moist soil plants and agriculture, and mixed pine and hardwood forests
Known Dispersed Recreation Opportunities	Hunting, fishing, camping, boating, photography, wildlife observation, and hiking/biking
Current Agreements/Commitments	Memorandum of agreement with U.S. Fish and Wildlife Service to manage the refuge
Potential Projects	Projects as identified by U.S. Fish and Wildlife Service
Potential Partners	U. S. Fish and Wildlife Service

Parcel 101a – (13.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located in the Blue Creek embayment and Cuba Marina Road provides access to the area. Though this parcel is part of the Tennessee National Wildlife Refuge, it is managed by TVA for commercial recreation. Cuba Landing Marina, including 260-wet slips, fuel dock and ships store has been operated at this location since 1984. TWRA maintains a public boat ramp and parking area at this location. The *undeveloped area has a moderate probability for the presence of cultural resources*. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-101a. Parcel Information

Location Component	Parcel Specific Information
County, State	Humphreys, Tennessee
TVA D–Stage Map Numbers	185
Stream Mile and Bank	TRM 115.4R

Parcel 102 – (486.8 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel consists of all the property allocated to Sensitive Resource Management between Duck River Miles 10 and 18. A portion of this parcel is also adjacent to the TNWR. Much of this tract is prime farmland, and approximately 108 acres is currently under term agricultural licenses for perennial hay and row crops. In addition, small portions of this tract are under linear

revocable licenses to support local utilities. The parcel provides multiple dispersed recreational opportunities including fishing, hunting, wildlife observation, photography, and hiking.

This parcel contains the visually significant Paint Rock Bluff Small Wild Area consisting of approximately 76 acres of unique rock features. Paint Rock Bluff is formed from thin–bedded limestone, having a light red hue. This color aberration makes it distinctive from other bluffs located along Kentucky Reservoir. No federally listed as endangered, threatened or special status species are known to occur on this parcel. However, three state-listed aquatic species, Slabside pearlymussel (*Lexingtonia dolabelloides*), Coppercreek darter (*Etheostoma aquali*), and Slenderhead darter (*Percina phoxocephala*), have been found in the Duck River fronting this parcel. Historically, this parcel has been used by wintering bald eagles. There is a high probability for the presence of cultural resources, but only a small portion of the area has been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-102. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SE and 31–NE
TVA D–Stage Map Numbers	146, 148, 157, and 159
Stream Mile and Bank	Duck River Miles 10–18B
Land Use/Land Cover	Mixture of limestone bluffs, deciduous forest, forested and scrub-shrub wetlands, perennial hay, and agricultural row crops
Known Dispersed Recreation Opportunities	Fishing, hiking, photography, wildlife observation, camping, and hunting
Current Agreements/Commitments	• Revocable license to Meriwether–Lewis Electric Cooperative for electric utilities • Revocable license to Southern Bell Telephone and Telegraph Company for telephone lines • Term agricultural licenses for perennial hay and row crops
Potential Projects	• Wetland protection • Establishment of native warm season grasses • Removal of invasive exotic vegetation on Paint Rock Bluff Small Wild Area
Potential Partners	Agricultural licensees

Parcel 103 – (5.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the Duck River and Bakerville Road provides access to the area. This parcel is adjacent to land that has been transferred to the State of Tennessee for public recreation. TWRA maintains a boat ramp and parking area at this location. The undeveloped area has a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-103. Parcel Information

Location Component	Parcel Specific Information
County, State	Humphreys, Tennessee
TVA D–Stage Map Numbers	146
Stream Mile and Bank	Duck River Mile 10.5R

Parcel 104 – (0.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is a small tract of land located along both banks of Duck River Mile 11.7 and contains a portion of the ROW and a bridge for Humphreys County Road 570. Requests for private water use facilities would not be considered.

Table 4-104. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SE
TVA D–Stage Map Numbers	146
Stream Mile and Bank	Duck River Mile 11.7B
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing and canoeing
Current Agreements/Commitments	• Permanent easement to Humphreys County for a roadway • Revocable license to Meriwether–Lewis Electric Cooperative for electric utilities • Revocable license to Southern Bell for telephone lines
Potential Projects	None identified
Potential Partners	Humphreys, Tennessee

Parcel 105 – (12.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Duck River and extends between TVA markers 146–50 to 146–51. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest and wetlands. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Sensitive cultural and natural resources are prevalent within the Duck River. In addition, wetlands encompass the entirety of this parcel. Potential impacts to these resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-105. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SE
TVA D–Stage Map Numbers	146
Stream Mile and Bank	Duck River Mile 12.2R
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	XGIR–485
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 106 – (2.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Duck River and extends between TVA markers 158–30 to 158–33. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest and grasslands. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Sensitive cultural and natural resources are prevalent within the Duck River. Potential impacts to these resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-106. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	31–NE
TVA D–Stage Map Numbers	159
Stream Mile and Bank	Duck River Mile 17.1R
Land Use/Land Cover	Deciduous forest and grasslands
Fronts Former TVA Tract (s)	XGIR–486
Structure Profile	Varies
Current Agreements/Commitments	Permanent easement to Humphreys, Tennessee for a roadway

Parcel 107 – (25.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land located along the left descending bank of the Duck River. The southernmost tract extends between TVA markers 159–21 to 159–22; the northernmost tract extends between TVA markers 157–59 to 157–60. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest and wetlands. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Sensitive cultural and natural resources are prevalent within the Duck River. In addition, wetlands are present along portions of this parcel. Potential impacts to these resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-107. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SE and 31–NE
TVA D–Stage Map Numbers	157 and 159
Stream Mile and Bank	Duck River Mile 14.6L and Duck River Mile 15.4L
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	XGIR–487 and XGIR–488
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 108 – (11.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Duck River and extends between TVA markers 148–53 to 146–52. This parcel lies entirely below the 375-foot msl, and the current land use is agriculture. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Sensitive cultural and natural resources are prevalent within the Duck River. In addition, wetlands are present along portions of this parcel. Potential impacts to these resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-108. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SE
TVA D–Stage Map Numbers	146 and 148
Stream Mile and Bank	Duck River Mile 10.4L
Land Use/Land Cover	Perennial hay and scattered shoreline wetlands
Fronts Former TVA Tract (s)	XGIR–489
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Term agricultural license for perennial hay

Parcel 109 – (129.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is comprised of several smaller tracts of land. The majority of this parcel is comprised of islands located across from Morgan Creek. The land cover of this parcel is predominantly a mixture of forested and scrub-shrub wetlands. This relatively isolated parcel supports a wide variety of small game species. This parcel contains prime waterfowl production and resting/feeding areas and habitat capable of supporting a wide variety of wetlands wildlife species. There is a low probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No private shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-109. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	31–SW
TVA D–Stage Map Numbers	189
Stream Mile and Bank	TRMs 118.6–119.4R
Land Use/Land Cover	Bottomland forest, forested wetlands, and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 110 – (2.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of two small tracts of land located in Perry County, Tennessee. Portions of the ROW for the Perry County roads of Lower Roans Creek Road and Driftwood Subdivision Road are located on this parcel. Requests for private water use facilities would not be considered.

Table 4-110. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	31–SW
TVA D–Stage Map Numbers	193
Stream Mile and Bank	TRM 123R
Land Use/Land Cover	Road right–of–way and deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Perry County, Tennessee, for a roadway
Potential Projects	None identified
Potential Partners	Perry, Tennessee

Parcel 111 – (28.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located at the upper end of Roan Creek embayment. The land cover of this parcel is predominantly a mixture of deciduous forest and forested wetlands. A small portion of this tract is under a linear revocable license to support electric utilities. Access to the parcel is limited to road only, and there is no access via boat because this parcel is separated from the reservoir by private property. Historically, embankment plantings were established on portions of this parcel. There is a low probability for the presence of cultural resources. No federally or state-listed species are known to be present on this parcel. No private shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-111. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	31–SW
TVA D–Stage Map Numbers	193
Stream Mile and Bank	TRM 123.0R
Land Use/Land Cover	Deciduous forest, forested wetlands, and historic bottomland tree plantings
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license to Meriwether–Lewis Electric Cooperative for electric utilities
Potential Projects	Conducting research on historic bottomland hardwood plantings
Potential Partners	Universities or other research institutions

Parcel 112 – (11.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the right descending bank of Toms Creek. The land cover of this parcel is predominantly a mixture of deciduous forest and forested wetlands. This parcel serves as a visual buffer from nearby shoreline development and provides numerous riparian habitat functions. Historically, embankment plantings were established on portions of this parcel. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No private shoreline

improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-112. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	31–SW
TVA D–Stage Map Numbers	193
Stream Mile and Bank	TRM 124.0R
Land Use/Land Cover	Deciduous forest, forested wetlands, and historic bottomland tree plantings
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license to a private individual for public water supply purposes
Potential Projects	Conducting research on historic bottomland hardwood plantings
Potential Partners	Universities or other research institutions

Parcel 113 – (27.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the upper end of Toms Creek embayment. The land cover of this parcel is predominantly a mixture of deciduous forest and forested wetlands. Portions of the shoreline have steep topography. A limited variety of wildlife utilizes available habitats. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Historically, embankment plantings were established on portions of this parcel. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No private shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-113. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	32–NW
TVA D–Stage Map Numbers	193
Stream Mile and Bank	TRM 124.1R
Land Use/Land Cover	Mixture of deciduous forest, forested wetlands, and historic bottomland tree plantings

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Limited hunting
Current Agreements/Commitments	Revocable license to Meriwether–Lewis Electric Cooperative for electric utilities
Potential Projects	Conducting research on historic bottomland hardwood plantings
Potential Partners	Universities or other research institutions

Parcel 114 – (1.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Perry County, Tennessee, and contains a portion of the ROW for Toms Creek Road, a Perry County road. Requests for private water use facilities would not be considered.

Table 4-114. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	32–NW
TVA D–Stage Map Numbers	194
Stream Mile and Bank	Toms Creek Mile 1.9R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license to Meriwether–Lewis Electric Cooperative for a transmission line right–of–way
Potential Projects	None identified
Potential Partners	Perry, Tennessee; Meriwether–Lewis Electric Cooperative

Parcel 115 – (48.0 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel supports the Lady's Bluff Small Wild Area. The parcel is managed to preserve unique natural features such as waterfalls, caves, ravines, scenic views, and plant life. A trail system presents the public with opportunities for hiking, wildlife and wildflower observation, and impressive views of Kentucky Reservoir and the surrounding countryside. This trail has both national and state recreation trail designations. A small parking lot and informative signs give access to this heavily used trail. A dispersed recreation inventory was conducted in 2009, and

the analysis identified three heavily used recreation sites located on a portion of the parcel. These sites have significant impacts associated with them and are considered sites in need for management actions. No federally or state-listed species are known to be present on this parcel. One cave occurs within 200 feet of this parcel. There is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-115. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	199 and 200
Stream Mile and Bank	TRMs 130.4–130.7R
Land Use/Land Cover	Mixture of deciduous forest and limestone bluffs
Known Dispersed Recreation Opportunities	Hiking, photography, wildlife observation, and camping
Current Agreements/Commitments	None identified
Potential Projects	• Mitigate impacts associated with dispersed recreation sites • Non–native invasive plant control • Trail maintenance
Potential Partners	Natural Resources Conservation Service

Parcel 116 – (27.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the right descending bank of Lick Creek. The land cover of this parcel is predominantly a mixture of deciduous forest and forested wetlands. Established road access supports various dispersed recreation opportunities on this parcel. A dispersed recreation impact analysis was conducted in 2009, and three moderately impacted dispersed use sites were found on the point of this parcel. There is a low probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No private shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-116. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	199
Stream Mile and Bank	TRMs 130.1–130.7R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Bank fishing, picnicking, swimming, and camping
Current Agreements/Commitments	None identified
Potential Projects	Mitigate impacts associated with dispersed recreation sites
Potential Partners	None identified

Parcel 117 – (5.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along Lick Creek and is accessible from Lick Creek Road. This shoreline parcel abuts a tract previously transferred to the State of Tennessee for public recreation. TWRA maintains a boat ramp and parking lot at this area. The undeveloped portion of this parcel has a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-117. Parcel Information

Location Component	Parcel Specific Information
County, State	Perry, Tennessee
TVA D–Stage Map Numbers	199
Stream Mile and Bank	TRM 131R

Parcel 118 – (84.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is comprised of several small tracts of land including several small islands and is located in the upper end of the Lick Creek embayment. The land cover of this parcel is predominantly a mixture of deciduous forest and forested wetlands. Approximately two acres of the eastern most portion of this parcel is currently under a term agricultural license for hay production. Other portions of this parcel provide beneficial habitat for several upland game

animals, as well as a diversity of wetland wildlife species. Multiple dispersed recreation opportunities are available on this site, and historically, this parcel has received extensive unauthorized ATV use. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No private shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-118. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE and 32–NW
TVA D–Stage Map Numbers	199
Stream Mile and Bank	TRM 130.5R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Term agricultural license for hay production
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Mitigate All Terrain Vehicle usage impacts
Potential Partners	None identified

Parcel 119 – (10.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River and along Lick Creek. This parcel extends between TVA markers 199–50 to 199–51. This parcel lies entirely below the 375-foot msl, and the current land use is for agriculture. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Wetlands are present along portions of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-119. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	32–NW
TVA D–Stage Map Numbers	199
Stream Mile and Bank	TRM 130.9R
Land Use/Land Cover	Agriculture (perennial hay) and wetlands
Fronts Former TVA Tract (s)	XGIR–689
Structure Profile	Elevation 384–foot mean sea level
Current Agreements/Commitments	Term agricultural license for perennial hay

Parcel 120 – (2.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the left descending bank of Lick Creek and extends between TVA markers 199–30 and 199–31. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No private shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-120. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE and 32–NW
TVA D–Stage Map Numbers	199
Stream Mile and Bank	TRM 130.5R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 121 – (1,191.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located approximately 3 miles north of US Route 412. A permanent easement (Tract No. XTGIR-115RE) has been conveyed to the State of Tennessee for the development of Mousetail Landing State Park. Park facilities include a visitor center, trails, campground, picnic areas, swimming beach, and shoreline fishing facilities. One cave occurs on this parcel. There is a high probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-121. Parcel Information

Location Component	Parcel Specific Information
County, State	Perry, Tennessee
TVA D–Stage Map Numbers	199 and 206
Stream Mile and Bank	TRM 132R

Parcel 122 – (23.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the upper end of Spring Creek embayment. The land cover of this parcel is predominantly a mixture of deciduous forest and forested wetlands. A small portion of this tract is under a linear revocable license to support electric utilities. In addition, a small portion of this parcel is separated from the remainder of the parcel by a public road. Hunting opportunities are available on this parcel. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No private shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-122. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	206 and 207
Stream Mile and Bank	TRMs 133.1–133.4R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Revocable license to Meriwether–Lewis Electric Cooperative for electric utilities
Potential Projects	None identified
Potential Partners	None identified

Parcel 123 – (0.4 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel is comprised of two small islands located in the upper end of Spring Creek. The parcel is accessible by boat; however, public use of this area is very limited. High quality wetlands provide habitat for a variety of wetland species. No federally or state-listed species are known to occur on this parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-123. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	206
Stream Mile and Bank	TRM 133.2R
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 124 – (0.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Perry County, Tennessee, and contains portions of the ROW for Perry County Roads 50 and 438. Requests for private water use facilities would not be considered.

Table 4-124. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	207
Stream Mile and Bank	TRM 133R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license to Meriwether–Lewis Electric Cooperative for a transmission line right–of–way
Potential Projects	None identified
Potential Partners	Perry, Tennessee; Meriwether–Lewis Electric Cooperative

Parcel 125 – (15.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River and along Spring Creek. This parcel extends between TVA markers 207–44 to parcel 122. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Spring Creek Summer Home Place Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Wetlands are present along portions of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-125. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	207
Stream Mile and Bank	TRM 133R
Land Use/Land Cover	Deciduous forest, maintained lawn, and wetlands
Fronts Former TVA Tract (s)	XGIR–504
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 126 – (38.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along Spring Creek and is upstream from Mousetail Landing State Park. Perryville Bottom Road provides access to this parcel. An easement (Tract No. XTGIR-109E) covering the eastern portion of this parcel has been conveyed to the State of Tennessee. A boat ramp, courtesy dock, and parking lot have been developed.

The western portion of the parcel was originally developed by TVA as a public recreation area. This area is managed as part of Mousetail Landing State Park for primitive camping with 16 campsites. Campsites are gravel with timber edging, a fire ring, and lantern pole. Campsites do not have electric or water. The paved campground road terminates at a small parking area at the river where there is a swing and three picnic tables for day use. The Spring Creek Trail is also present in this area. The undeveloped area has a high probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-126. Parcel Information

Location Component	Parcel Specific Information
County, State	Perry, Tennessee
TVA D–Stage Map Numbers	207
Stream Mile and Bank	TRM 133R

Parcel 127 – (0.5 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains the pump house associated with the East Perryville Dewatering Area. Requests for private water use facilities would not be considered.

Table 4-127. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	207
Stream Mile and Bank	TRM 133.2R
Land Use/Land Cover	Pump house and levee
Known Dispersed Recreation Opportunities	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	None identified
Potential Projects	Restore pump house
Potential Partners	None identified

Parcel 128 – (732.7 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This large parcel is located slightly downstream of Cypress Creek and is bisected by TSRs 20 and 100. Access to the parcel is readily available through either the adjacent state park or public roads. This parcel contains the East Perryville Dewatering Unit. The dewatering unit consisted of 3,200 linear feet of constructed levee, 3.4 miles of drainage ditches, and a pumping station. The dewatering unit consists of approximately 344 acres of which 250 acres are dewatered. In 1992, the levee was breached by a large flood. Therefore, this area fluctuates with the elevation of Kentucky Reservoir. The area around the pump house receives a great deal of fishing pressure from visitors to the adjacent Mousetail Landing State Park. Due to the presence of the dewatering unit, there are several high quality wetlands present providing excellent habitat and nesting sites for a variety of waterfowl and other wetland wildlife species. Historically, this parcel has received extensive unauthorized ATV use. No federally or state-listed species are known to be present on this parcel. However, the parcel is used as foraging habitat by the federally endangered gray bat (*Myotis grisescens*) which are known to utilize nearby Featherfoot Cave across the reservoir. In addition, there is a high probability for the presence of cultural resources on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered. A first class navigation safety landing fronts the shoreline of this tract.

Table 4-128. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE and 22–SE
TVA D–Stage Map Numbers	207 and 209
Stream Mile and Bank	TRMs 133.4–136.3R
Land Use/Land Cover	Forested wetlands, emergent wetlands, scrub-shrub wetlands, open water, and bottomland hardwood forest
Known Dispersed Recreation Opportunities	Hunting, photography, and wildlife observation

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	None identified
Potential Projects	• Mitigate impacts associated with All Terrain Vehicle usage • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Restore dewatering unit to full potential
Potential Partners	• Tennessee Wildlife Resources Agency • Ducks Unlimited • U. S. Fish and Wildlife Services

Parcel 129 – (13.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of two noncontiguous small tracts of land. One tract is located along both sides of TRM 134.9 in Decatur and Perry counties, Tennessee. This parcel contains portions of the ROWs for US Route 412 and TSRs 20 and 100. The Alvin C. York Bridge connects both banks of the Tennessee River. The second tract consists of a navigation first class landing at TRM 135.5R. Requests for private water use facilities would not be considered.

Table 4-129. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur and Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE and 22–SE
TVA D–Stage Map Numbers	207, 208, and 209
Stream Mile and Bank	TRM 133R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Revocable license to Parsons Telephone Company for telephone lines
Potential Projects	None identified
Potential Partners	None identified

Parcel 130 – (26.8 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel consists is located along the right descending bank at TRM 136.1. Large portions of this parcel are under revocable licenses to Teague Brothers Sand and Gravel Company and to Perry County, Tennessee, for barge terminals. The majority of the shoreline has been cleared of

vegetation, but approximately 13 acres of the inland portion of the property remains in deciduous forest. Southern portion of this parcel has known sensitive cultural resources. Additional industrial development would require further evaluation of their integrity. Requests for use of TVA lands and associated water–based structures to support industrial purposes would be considered.

Table 4-130. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	209
Stream Mile and Bank	TRM 136.1R
Land Use/Land Cover	Industrial and deciduous forest
Current Agreements/Commitments	• Revocable license to Perry County, Tennessee, for a barge terminal • Revocable license to Teague Brothers Sand and Gravel Company for a barge terminal

---

Parcel 131 – (104.8 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This large parcel is comprised of one mainland tract of land and several small islands and is located in the upper end of the Cypress Creek embayment. Public Access is limited to the majority of this parcel, and a small portion of this parcel is under a permanent easement to support a gas pipeline. The land cover of this parcel is predominantly deciduous forest with forested and scrub-shrub wetlands present along the shoreline. No federally or state-listed species are known to be present on this parcel. In addition, there is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-131. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	209
Stream Mile and Bank	TRMs 136.4–136.7R
Land Use/Land Cover	Deciduous forest, forested wetlands, and scrub-shrub wetlands

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Permanent easement to Tennessee Gas Transmission Company for a gas pipeline
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetlands protection and enhancement
Potential Partners	None identified

Parcel 132 – (29.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is comprised of several distinct tracts of land and is located along the left descending bank of Cypress Creek. The parcel has a diversity of habitats present, including open grassland, forested and scrub-shrub wetlands, and deciduous forest. This parcel also provides beneficial habitat for several game animals and a diversity of wetland wildlife species. A small portion of the parcel is used extensively for primitive camping, and another portion of the parcel has received some illegal dumping of trash and litter. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-132. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	209
Stream Mile and Bank	TRM 136.6R
Land Use/Land Cover	Deciduous forest, forested wetlands, scrub-shrub wetlands, and open grassland
Known Dispersed Recreation Opportunities	Hunting, wildlife observation, and camping
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Wetland protection • Mitigate impacts associated with dispersed recreation use • Mitigate impacts caused by unauthorized dumping of trash and litter • Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 133 – (41.8 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of two tracts of land along the right descending bank of TRM 137.1. Three pipelines encumber this parcel. Wetlands are also present on the parcel and along the shoreline. There is a high probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-133. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	209
Stream Mile and Bank	TRM 137.1R
Land Use/Land Cover	Grassland and wetland
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Three permanent easements to Tennessee Gas Transmission Company for pipeline rights–of–way
Potential Projects	None identified
Potential Partners	None identified

Parcel 134 – (2.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along Cypress Creek and is approximately one mile south of US Route 412. This parcel is under a revocable license agreement to Cypress Creek Marina for commercial recreation. Facilities on the parcel include a marina, boat ramp, and parking lot.

Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-134. Parcel Information

Location Component	Parcel Specific Information
County, State	Perry, Tennessee
TVA D–Stage Map Numbers	209
Stream Mile and Bank	TRM 136.5R

Parcel 135 – (10.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small and linear parcel is located downstream of Marsh Creek. The backlying land use is residential, and some unauthorized vegetation removal has occurred on portions of this parcel. The parcel is accessible through public roads; however, due to its small size and proximity to nearby development, public use of this area is very limited. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-135. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	209 and 223
Stream Mile and Bank	TRMs 137.4–137.7R
Land Use/Land Cover	Deciduous forest and grasslands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Revocable license to Meriwether–Lewis Electric Cooperative for electric utilities • Permanent easement to Tennessee Gas Transmission Company for a gas pipeline
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 136 – (87.4 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along Marsh Creek. This entire parcel is proposed for inclusion in the Jennings Bluff HPA. The parcel has unique habitats of cedar glades and barren communities associated with limestone of Silurian age. Silurian age glade communities are restricted to a narrow band along the Tennessee River in West Tennessee. These glades provide habitat for several rare plant species. The proposed HPA would be allocated for habitat protection, wildlife management, and visual management. Historically, this parcel has received extensive unauthorized ATV use. No federally listed as endangered, threatened or special status species are known to be present on this parcel. However, three state-listed plant species, Rough rattlesnake root (*Prenanthes asperal*), Blue sage (*Salvia azurea var. grandiflora*), and Barbed rattlesnake root (*Prenanthes barbarata*), are known to occur on this parcel. All three plants are listed in Tennessee as species of special concern. In addition, there is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-136. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	223
Stream Mile and Bank	TRMs 137.8–138.3R
Land Use/Land Cover	Deciduous forest, forested wetlands, limestone bluffs, and cedar glades
Known Dispersed Recreation Opportunities	Hiking, wildlife observation, and scenic viewing
Current Agreements/Commitments	None identified
Potential Projects	• Mitigate impacts associated with All Terrain Vehicle usage • Refresh the existing paint denoting TVA's property boundaries and HPA designation • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Survey for invasive plant control needs
Potential Partners	• Tennessee Nature Conservancy • Universities or Colleges

Parcel 137 – (0.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is contains the Jennings Bluff Navigational Light at TRM 137.9R. The neighboring parcels and backlying land cover are deciduous forest. Future development of this tract will be restricted and requests for private water use facilities would not be considered.

Table 4-137. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	223
Stream Mile and Bank	TRM 137.9R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 138 – (246.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is located along Marsh Creek and consists of several small islands and one large tract located on the mainland. The land cover of the majority of this parcel is considered deciduous forest with significant scrub-shrub and forested wetlands present along most of the shoreline. Access to this parcel is available through public roads and by boat. The parcel's habitat provides opportunities for hunting. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-138. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	223
Stream Mile and Bank	TRMs 137.5–138.5R

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Deciduous forest, forested wetlands, and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 139 – (701.4 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This large parcel is comprised of deciduous forest and located near US Route 412, TSR 20, and TSR 100 with Marsh Creek Road directly serving the parcel. Although the TVA property remains is a forested state, the backlying property has been cleared for timber. Groupings of islands protect the shoreline and would provide a natural safety harbor for the transportation of goods associated with an industrial site. Wetlands are present along the Marsh Creek embayment and have the potential to be present along the islands and some portions of the parcel's shoreline. There is a high probability that cultural resources could be present along the islands and the level shoreline, and an archaeological survey would need to occur prior to any excavation or dredging occurring along the shoreline. Only a light reconnaissance archaeological survey has taken place of the forested area. Although no known endangered and threatened species have been historically found on the parcel, a site-specific environmental review will be conducted prior to any ground disturbance. Requests for use of TVA lands and associated water–based structures to support industrial purposes would be considered.

Table 4-139. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE and 32–SW
TVA D–Stage Map Numbers	223 and 224
Stream Mile and Bank	Marsh Creek Mile 1L TRMs 138.8–139.9R
Land Use/Land Cover	Deciduous forest and limited shoreline wetlands
Current Agreements/Commitments	None identified

Parcel 140 – (264.4 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is comprised of a peninsula located along the northern portion of the Cedar Creek embayment. Access is available by boat and road that is located at the southernmost tip of the parcel. The parcel is predominantly covered in deciduous forest with forested wetlands present along the shoreline. The parcel contains exceptional waterfowl and wetlands wildlife habitat. This area also receives moderate use for a variety of dispersed recreation activities, including camping and hunting. In addition, this parcel has received extensive unauthorized ATV use and unauthorized dumping of trash and litter. TVA has collaborated with local residents to prevent such unauthorized activity. Historically, a portion of this parcel was licensed to the TDEC for a seed orchard. No federally listed as endangered, threatened or special status species are known to be present on this parcel. However, the Kentucky Reservoir Mussel Sanctuary, as designated by TWRA, fronts a large portion of this parcel. In addition, there is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-140. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE and 32–SW
TVA D–Stage Map Numbers	224 and 227
Stream Mile and Bank	TRMs 138.9–141.4R
Land Use/Land Cover	Deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Hunting, camping, and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Mitigate unauthorized use impacts • Mitigate All Terrain Vehicle usage impacts
Potential Partners	None identified

Parcel 141 – (415.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located at the mouth of Cedar Creek. The land cover of the majority of this parcel is considered deciduous forest with significant scrub-shrub and forested wetlands present along most of the shoreline. In the past, TVA actively managed portions of this parcel for forest stands, and substantial loblolly pine plantings have occurred in certain areas. In addition, a small portion of this parcel is under a term agricultural license for livestock grazing. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-141. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	32–SW
TVA D–Stage Map Numbers	224 and 227
Stream Mile and Bank	TRMs 139.9–141.1R
Land Use/Land Cover	Deciduous forest, pine plantations, hay/pasture, forested wetlands, and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Term agricultural license for cattle grazing
Potential Projects	• Future management of pine plantations for Indiana Bat habitat • Forest management for wildlife habitat
Potential Partners	• United States Fish and Wildlife Services • Tennessee Wildlife Resources Agency

Parcel 142 – (6.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along Cedar Creek. The parcel is under license to Cedar Creek Marina and is used for commercial recreation. Current facilities include a marina. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-142. Parcel Information

Location Component	Parcel Specific Information
County, State	Perry, Tennessee
TVA D–Stage Map Numbers	227
Stream Mile and Bank	TRM 141.4R

Parcel 143 – (24.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along Cedar Creek and adjoins property that has been transferred to the State of Tennessee for public recreation. TWRA maintains a boat ramp and parking lot on the western tip of this parcel. The remainder of the parcel is undeveloped and forested. There is a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-143. Parcel Information

Location Component	Parcel Specific Information
County, State	Perry, Tennessee
TVA D–Stage Map Numbers	227
Stream Mile and Bank	TRM 141.4R

Parcel 144 – (453.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is located along the left descending bank of Cedar Creek and includes several small islands. The land cover of the majority of this parcel is considered deciduous forest with significant scrub-shrub and forested wetlands present along most of the shoreline. Historically, embankment plantings were established on portions of this parcel to protect relocated roadway embankments from erosion. In addition, portions of the shoreline have been stabilized to prevent further erosion. Much of this parcel is prime farmland and a 39–acre portion is currently under a term agricultural license for perennial hay. Access is limited to the majority of this parcel, which limits some of the public use. Limestone bluffs provide scenic views of the reservoir and an informal trail system is present on this parcel. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are

known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-144. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	32–SW
TVA D–Stage Map Numbers	227
Stream Mile and Bank	TRMs 141.5–142.7R
Land Use/Land Cover	Deciduous forest, pine plantations, forested wetlands, scrub-shrub wetlands, historic bottomland tree plantings, and perennial hay
Known Dispersed Recreation Opportunities	Hunting, hiking, and wildlife observation
Current Agreements/Commitments	Term agricultural license for perennial hay
Potential Projects	• Conversion of present agricultural area to native warm season grasses and legumes • Research on historic embankment plantings • Assess informal trail for potential inclusion into TVA's formal trail system
Potential Partners	None identified

Parcel 145 – (15.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of the Tennessee River within the Cedar Creek embayment. This parcel extends between TVA markers 227–70 to 227–69. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest and wetlands. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Wetlands are present along the entirety of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-145. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	32–SW
TVA D–Stage Map Numbers	227
Stream Mile and Bank	TRM 141.3R

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	XGIR–145, XGIR–515, and XGIR–738
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 146 – (11.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel consists of two noncontiguous tracts of land. One portion of the parcel is located along the right descending bank of the Tennessee River, and the other portion of the parcel is located along Bee Creek. The Tennessee River parcel is an approximately 30-feet wide strip of property fronting a small residential development. There are existing facilities on this portion of the parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

The Bee Creek parcel is bisected by a public road and is accessible through this road. However, no boat access is available as this parcel is not adjacent to the reservoir body. Historically, this parcel has been managed for ROW protection for the public road. Due to its small size and location, there are limited public use opportunities available. There is a low probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present on this portion of the parcel, and requests for private water use facilities would not be considered.

Table 4-146. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	32–SW
TVA D–Stage Map Numbers	234
Stream Mile and Bank	TRMs 143.4 and 144.0R
Land Use/Land Cover	Deciduous forest and open grassland
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 147 – (1.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Perry County, Tennessee, and contains portions of Lego School Road and Bee Creek Road. Requests for private water use facilities would not be considered.

Table 4-147. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	32–SW
TVA D–Stage Map Numbers	234
Stream Mile and Bank	TRM 144R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 148 – (13.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along Short Creek. This parcel is bisected by a public road. Historically, this parcel was managed to protect the public road ROW protection, and embankment plantings were established on portions of this parcel. Due to its small size and location, there are limited public use opportunities available. There is a low probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-148. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	33–NW
TVA D–Stage Map Numbers	234
Stream Mile and Bank	TRM 145.6R
Land Use/Land Cover	Deciduous forest and historic bottomland tree plantings

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Embankment plantings research
Potential Partners	None identified

Parcel 149 – (1.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Perry County, Tennessee, and contains portions of Lego School Road and Phillips Road. Requests for private water use facilities would not be considered.

Table 4-149. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	33–NW
TVA D–Stage Map Numbers	234
Stream Mile and Bank	TRM 145.6R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 150 – (62.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along White Oak Creek. This relatively isolated parcel supports a limited variety of small game. The land cover of the majority of the parcel is comprised of young bottomland hardwoods with wetlands occurring along the shoreline. There is limited access to this parcel by roads; in addition, the parcel is accessible by boat. Despite the limited access, the area does receive dispersed recreation use especially by hunters and campers. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-150. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	33–NW
TVA D–Stage Map Numbers	235 and 236
Stream Mile and Bank	TRMs 146.8–147.5R
Land Use/Land Cover	Bottomland hardwoods and forested wetlands
Known Dispersed Recreation Opportunities	Hunting and camping
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Conduct a Limits of Acceptable Change analysis on dispersed recreation site • Assess access to parcel to determine if any control measures are necessary
Potential Partners	None identified

Parcel 151 – (7.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel consists of a single island located downstream from Beech Creek. Young bottomland hardwoods cover the majority of this parcel with scrub-shrub and emergent wetlands occurring along the shoreline. The parcel is accessible by boat only; therefore, public use is limited. Despite the limited access, the area does receive dispersed recreation use especially by hunters. There is a low probability for the presence of cultural resources on this parcel. While no federally or state-listed species are known to be present on the island, the island provides suitable habitat for nesting wading/water birds. In addition, listed aquatic species are known to be present in the nearby river channel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-151. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Perry, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NE
TVA D–Stage Map Numbers	240
Stream Mile and Bank	TRM 153.3B

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Bottomland hardwoods and scrub-shrub and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Assess island for shoreline stabilization needs • Assess island for possible use by nesting wading/water birds
Potential Partners	None identified

Parcel 152 – (62.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This relatively isolated parcel is located at the upper end of the Beech Creek embayment. Young bottomland hardwoods cover the majority of this parcel with scrub-shrub and emergent wetlands occurring along the shoreline. Historically, embankment plantings were established on portions of this parcel to protect relocated roadway embankments from erosion. The parcel is accessible by boat and public roads that transect the property. The area does receive dispersed recreation use especially by hunters. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-152. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Wayne, Tennessee
Topographic Map (Sheet No. and Quadrant)	33–NW
TVA D–Stage Map Numbers	241
Stream Mile and Bank	TRM 155.0R
Land Use/Land Cover	Historic bottomland tree plantings and forested wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	Embankment planting research
Potential Partners	None identified

Parcel 153 – (7.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Wayne County, Tennessee, and contains a portion of TSR 128 and a transmission line ROW. There is a moderate probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-153. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Wayne, Tennessee
Topographic Map (Sheet No. and Quadrant)	33–NW
TVA D–Stage Map Numbers	241
Stream Mile and Bank	Beech Creek Mile 2.6B
Land Use/Land Cover	Road and transmission line rights–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Permanent easement to Wayne County, Tennessee, for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 154 – (3.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is comprised of several small islands and are located slightly upstream of Beech Creek. These islands are predominantly covered in forested wetlands and provide habitat for a variety of wetland wildlife species. Access to the parcel is by boat only. Due to their small size, public use is limited; although, waterfowl hunting could occur. There is a low probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-154. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Wayne, Tennessee
Topographic Map (Sheet No. and Quadrant)	33–NW
TVA D–Stage Map Numbers	241 and 244

Location Component and Public Involvement Opportunities	Parcel Specific Information
Stream Mile and Bank	TRMs 155.0–155.9B
Land Use/Land Cover	Forested wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Shoreline stabilization • Assess for wading/water bird nesting use
Potential Partners	None identified

Parcel 155 – (8.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small and relatively isolated parcel is located near Buttam Hollow in Wayne County, Tennessee. The land cover of the majority of this parcel is considered deciduous forest with forested wetlands present along the shoreline. Historically, embankment plantings were established on portions of this parcel to protect relocated roadway embankments from erosion. Access to the parcel is available by boat only. Due to this limited access and the small size of this parcel, public use is limited. There is a low probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on the parcel. No existing shoreline improvements are currently present and requests for private water use facilities would not be considered.

Table 4-155. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Wayne, Tennessee
Topographic Map (Sheet No. and Quadrant)	33–NW
TVA D–Stage Map Numbers	243
Stream Mile and Bank	TRM 156.4R
Land Use/Land Cover	Forested wetlands and historic bottomland tree planting
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Embankment planting research • Placement of TVA property and public lands signs along parcel boundaries
Potential Partners	None identified

Parcel 156 – (22.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along Ross Creek in the town of Clifton, Tennessee. The parcel is adjacent to a community park that includes sports fields. The parcel is under a revocable license to the City of Clifton for public recreation. Most of the property is currently undeveloped and supports dispersed recreation activities.

The portion of this parcel located along the east side of Ross Creek and south of TSR 128 is a large mowed field containing a ball field with backstop. The adjacent area is used for community activities and has 15 light poles with lights, electrical power supply, and water. The portion of the parcel located north of TSR 128 and adjacent to the reservoir contains a paved parking lot next to a picnic pavilion, security lights, public restroom, gravel playground with swing, seesaw, and monkey bars, and newly erected cannons on the river bank. A few picnic tables, park-type grills, foot bridge to a second paved parking area, and three sitting benches are located in this area. The narrow peninsula located along the left descending bank of Ross Creek contains a gravel road, security lights, informal parking, and fishing access.

This undeveloped area could be developed to meet future community recreation needs. However, this area has a moderate probability for the presence of cultural resources. A first class navigation safety landing is located along the downstream portion of this parcel. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-156. Parcel Information

Location Component	Parcel Specific Information
County, State	Wayne, Tennessee
TVA D–Stage Map Numbers	243
Stream Mile and Bank	TRM 157.5R

Parcel 157 – (9.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small relatively isolated parcel is located along Ross Creek. The land cover of the majority of this parcel is considered deciduous forest with forested wetlands present along the shoreline. Historically, embankment plantings were established on portions of this parcel to protect

relocated roadway embankments from erosion. Due to limited access and the small size of this parcel, public use is limited. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on the parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-157. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Wayne, Tennessee
Topographic Map (Sheet No. and Quadrant)	33–NW
TVA D–Stage Map Numbers	255
Stream Mile and Bank	TRM 157.7R
Land Use/Land Cover	Forested wetlands and historic bottomland tree planting
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Embankment planting research • Placement of TVA property and public lands signs along parcel boundaries
Potential Partners	None identified

Parcel 158 – (1.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel adjoins property (Tract No. XTGIR-66) that TVA previously transferred to the City of Clifton for public recreation. The parcel is located near the town's center and has been developed for day use recreation with amenities including picnic sites, sitting benches, flag pole, boat ramp, trails, and river viewing/overlook. This parcel is also the site of the Clifton Ferry landing and has substantial local significance. The ferry landing road that leads to the reservoir is blocked with a large ornamental iron gate. The area below the overlook has a few scattered trees with some mowed area to maintain a good visual appearance. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-158. Parcel Information

Location Component	Parcel Specific Information
County, State	Wayne, Tennessee
TVA D–Stage Map Numbers	243
Stream Mile and Bank	TRM 157.9R

Parcel 159 – (39.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel adjoins property (Tract No. XTGIR-67) that TVA previously transferred to the City of Clifton for public recreation. The parcel is located off TSR 128 and extends along Roach Creek. Facilities on this parcel include a marina, boat launching ramp, and campground. The undeveloped areas have a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-159. Parcel Information

Location Component	Parcel Specific Information
County, State	Wayne, Tennessee
TVA D–Stage Map Numbers	254
Stream Mile and Bank	TRM 158.7R

Parcel 160 – (16.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the Tennessee River and upstream of Roach Creek. The land cover of the majority of this parcel is considered deciduous forest with significant wetlands present along the shoreline. Due to limited access via boat only and the small size of this parcel, public use is limited. There is a high probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-160. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Wayne, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	254
Stream Mile and Bank	TRM 159.5R
Land Use/Land Cover	Forested wetlands, scrub-shrub wetlands, emergent wetlands, and deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 161 – (2.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along Short Creek. The entirety of this small parcel is covered in scrub-shrub wetlands. Due to limited access via boat only and the small size of this parcel, public use is limited. There is a high probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-161. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Wayne, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	254
Stream Mile and Bank	TRM 160.3R
Land Use/Land Cover	Scrub-shrub wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 162 – (46.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This relatively isolated parcel is located along the upper end of the Short Creek embayment. The parcel is bisected and accessible by TSR 114 road. The land cover of the entirety of this small parcel is covered in deciduous forest. Historically, embankment plantings were established on portions of this parcel to protect the relocated road ROW from erosion. Due to the small size of this parcel, public use is limited. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-162. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hardin, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	254
Stream Mile and Bank	TRM 160.0R
Land Use/Land Cover	Historic bottomland tree plantings
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 163 – (4.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Hardin County, Tennessee, and contains a portion of TSR 114. Requests for private water use facilities would not be considered.

Table 4-163. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hardin, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NE
TVA D–Stage Map Numbers	254
Stream Mile and Bank	Beech Creek Mile 2.6B
Land Use/Land Cover	Road right–of–way

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Tennessee Department of Transportation for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 164 – (53.5 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small isolated parcel is located across the Tennessee River from Saltillo, Tennessee. The parcel includes the proposed Wilkinson Pond Slough Natural Area. This unique parcel features a stand of old growth bottomland hardwood which includes, but is not limited to, shumard, overcup, water, willow, and swamp chestnut oaks; bald cypress; American beech; sweet, black and tupelo gum. Some of the trees are estimated to be 200 years or greater in age. This parcel contains suitable habitat for waterfowl production and resting/feeding and suitable habitat capable of supporting a diversity of wetlands wildlife species. There is a high probability for the presence of cultural resources. No federally or state-listed species are known to occur on the parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-164. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hardin, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NE
TVA D–Stage Map Numbers	120 and 120–1
Stream Mile and Bank	TRMs 170.7–171.1R
Land Use/Land Cover	Wetland complex and old–growth bottomland hardwoods with rare histosol soils
Known Dispersed Recreation Opportunities	Scenic viewing and wildlife observation
Current Agreements/Commitments	• Proposed Habitat Protection Area (1987) • Proposed Protection of old–growth stands of bottomland hardwood forest

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property, public lands and natural area signs along parcel boundaries • Data collection and inventory of plant and animal species present • Implement natural areas management plan
Potential Partners	Research opportunities for educational institutions

Parcel 165 – (12.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small linear parcel is located along the Tennessee River and upstream of Short Creek. The land cover is predominantly deciduous forest. This parcel serves as a visual buffer in addition to providing numerous riparian habitat functions and access is by boat only. There is a high probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-165. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hardin, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	260
Stream Mile and Bank	TRMs 170.5–171.8R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Refresh the existing paint denoting TVA's property boundaries
Potential Partners	None identified

Parcel 166 – (2.5 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is a first class safety landing. This area is available for commercial barges and recreational boats during adverse weather conditions or equipment malfunction. Future

development of this tract will be restricted and requests for private water use facilities would not be considered.

Table 4-166. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hardin, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	250
Stream Mile and Bank	TRM 171.1L
Land Use/Land Cover	Grasslands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 167 – (7.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is a recreation easement (Tract No. XTGIR-128RE) to the City of Savannah. The area is known as Wayne Jerrolds River Park and is located immediately upstream from the US Route 64 reservoir crossing. Park facilities include a boat ramp, picnic pavilions, picnic area, trails, and a visitor overlook. The undeveloped area has a low probability for the presence of cultural resources, but the area has not been surveyed.

Table 4-167. Parcel Information

Location Component	Parcel Specific Information
County, State	Hardin, Tennessee
TVA D–Stage Map Numbers	281
Stream Mile and Bank	TRM 190.2R

Parcel 168 – (14.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small isolated parcel is comprised of two distinct tracts of land. The parcel is located along White Oak Creek near the TSR 104 Bridge. The southernmost tract is managed for ROW protection along TSR 104. This land cover of the parcel is predominantly deciduous forest with significant forested wetlands present. Both portions of the parcel provide habitat for wetland

wildlife species and serve as a visual buffer. Access to the parcel is available through public roads and possibly by boat. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-168. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hardin, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–SW
TVA D–Stage Map Numbers	261 and 269
Stream Mile and Bank	TRMs 173.4–174.0L
Land Use/Land Cover	Deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Refresh the existing paint denoting TVA's property boundaries
Potential Partners	None identified

Parcel 169 – (1.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Hardin County, Tennessee, and contains a portion of Saltillo Road. Requests for private water use facilities would not be considered.

Table 4-169. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hardin, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–SW
TVA D–Stage Map Numbers	269
Stream Mile and Bank	White Oak Creek Mile 1.8L
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Tennessee Department of Transportation for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 170 – (0.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small isolated parcel is comprised of two distinct tracts of land. The parcel is located between White Oak Creek and Mud Creek and is quite a distance from Kentucky Reservoir. The land cover of the parcel is predominantly emergent wetlands and provides habitat for waterfowl and numerous other wetland wildlife species. Due to its small size and limited access, this parcel receives very little public use. There is a low probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-170. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hardin, Tennessee
Topographic Map (Sheet No. and Quadrant)	12–SE
TVA D–Stage Map Numbers	268
Stream Mile and Bank	White Oak Creek Mile 8.5R
Land Use/Land Cover	Emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Refresh the existing paint denoting TVA's property boundaries
Potential Partners	None identified

Parcel 171 – (35.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel comprised of several distinct tracts of land is located along Doe Creek. Portions of this parcel are bisected by TSR 69 and access is available through this public road. This parcel is predominantly deciduous forest with forested wetlands along portions of the shoreline. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-171. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	250
Stream Mile and Bank	TRMs 171.1–171.8L
Land Use/Land Cover	Deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Waterfowl hunting and camping
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 172 – (1.8 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Hardin and Decatur counties, Tennessee, and contains a portion of TSR 69. Requests for private water use facilities would not be considered.

Table 4-172. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hardin and Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	250–D
Stream Mile and Bank	Doe Creek Mile 0.6R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 173 – (8.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along Doe Creek and TSR 69 provides access to the area. This parcel adjoins property (Tract No. XTGIR-110) that TVA previously transferred to the State of Tennessee for public recreation. There is a high probability for the presence of cultural

resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-173. Parcel Information

Location Component	Parcel Specific Information
County, State	Decatur, Tennessee
TVA D–Stage Map Numbers	250
Stream Mile and Bank	TRM 179.9L

Parcel 174 – (26.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along Doe Creek. The majority of this parcel is prime farmland, and a 16–acre portion of the parcel is under a term agricultural license for perennial hay. Public access to the parcel is available by boat only. There is a high probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-174. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	250
Stream Mile and Bank	TRMs 171.6–171.8L
Land Use/Land Cover	Open grassland and perennial hay
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Term agricultural license for perennial hay
Potential Projects	Establishment of native warm season grasses for wildlife habitat
Potential Partners	Agricultural Licensee

Parcel 175 – (3.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small linear parcel is located along the Tennessee River and downstream of the Doe Creek. The land cover of the majority of this parcel is deciduous forest. Access to the parcel is

available by boat only. Due to its small size and limited access, this parcel receives very little public use. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-175. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	250
Stream Mile and Bank	TRMs 171.6–171.7L
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 176 – (3.6 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This very small and linear parcel is comprised of scrub-shrub vegetation along the shoreline and located near TSR 69. The backlying property has been cleared for cropland and pasture. A first class navigation safety landing is located along the opposite bank of the Tennessee River. There is a high probability for the presence of cultural resources. A site-specific environmental review will be conducted prior to any ground disturbance. Requests for use of TVA lands and associated water–based structures to support industrial purposes would be considered.

Table 4-176. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	250 and 251
Stream Mile and Bank	TRM 171L
Land Use/Land Cover	Scrub-shrub
Current Agreements/Commitments	Revocable license to Arrow Transportation Company for industrial purposes

Parcel 177 – (19.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along Buck Branch. The land cover of the majority of this parcel is deciduous forest with forested, and scrub-shrub wetlands are present along portions of the shoreline. Access to the parcel is available by boat and through adjacent public roads. Due to its small size and limited access, this parcel receives very little public use. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. A small portion of the shoreline has been stabilized to protect from further erosion. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-177. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	251
Stream Mile and Bank	TRMs 170.2–170.6L
Land Use/Land Cover	Deciduous forest, scrub-shrub wetlands, and forested wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 178 – (0.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains the Swallow Bluff Navigational Light at TRM 170.1L. The neighboring parcels and backlying land use are deciduous forest and residential. There is a moderate probability for the presence of cultural resources. Future development of this tract will be restricted and requests for private water use facilities would not be considered.

Table 4-178. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	251
Stream Mile and Bank	TRM 170.1L
Land Use/Land Cover	Deciduous forest and residential
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 179 – (21.2 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel is located along Swallow Bluff. The parcel is predominantly covered in a unique cedar glade that provides habitat for a Tennessee state-listed plant species, Tower–mustard (*Arabis glabra*). The bluff portion of the parcel is a historical nesting site for the Cliff Swallow (*Petrochelidon pyrrhonota*) which nests in large colonies. The bluff that is present on this parcel is considered a highly significant visual feature and resource. In addition, the bottom portions of the bluff near the reservoir shoreline could be used by several other migratory bird species for nesting habitat. No federally listed as endangered, threatened or special status species are known to occur on the parcel. However, there is a high probability for the presence of cultural resources. Access to the parcel is available by boat only. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-179. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	251
Stream Mile and Bank	TRMs 168.6–169.2L
Land Use/Land Cover	Cedar glade and limestone bluff
Known Dispersed Recreation Opportunities	Wildlife observation and nature study
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Conduct an assessment for invasive plant species occurrence and management needs related to unique cedar glade plants • Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	• The Tennessee Nature Conservancy • Tennessee Department of Environment and Conservation Heritage staff

Parcel 180 – (15.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along Stewman Creek and TSR 69 provides access to the area. This parcel adjoins property (Tract No. XTGIR-20) that TVA previously transferred to the State of Tennessee for recreation. A small boat ramp area and parking has been developed on a portion of the property. The remainder of the parcel is undeveloped, and the undeveloped area has a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-180. Parcel Information

Location Component	Parcel Specific Information
County, State	Decatur, Tennessee
TVA D–Stage Map Numbers	251
Stream Mile and Bank	TRM 168L

Parcel 181 – (0.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Decatur Counties, Tennessee, and contains a portion of TSR 69. Requests for private water use facilities would not be considered.

Table 4-181. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	247 and 251
Stream Mile and Bank	Stewman Creek 0.5B
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 182 – (11.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along Stewman Creek. The land cover of the majority of this parcel is deciduous forest with forested and scrub-shrub wetlands present along portions of the shoreline. Access to the parcel is available by boat only. Due to its small size and limited access, this parcel receives very little public use. This parcel serves as a visual buffer in addition to providing numerous riparian habitat functions. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-182. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	251
Stream Mile and Bank	TRM 168.0L
Land Use/Land Cover	Mixture of deciduous forest and forested and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 183 – (22.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is comprised of three distinct tracts of land located along Turnbo Creek. The land cover of the majority of this parcel is deciduous forest with forested and scrub-shrub wetlands present along portions of the shoreline. The majority of this parcel is accessible by boat only; however, a small portion is accessible through adjacent public roads. Due to its small size and limited access, this parcel receives very little public use. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-183. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NW
TVA D–Stage Map Numbers	238 and 247
Stream Mile and Bank	TRM 164.5L
Land Use/Land Cover	Mixture of deciduous forest and forested and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 184 – (2.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts located along the left descending bank of the Tennessee River within Turnbo Creek. This parcel extends among TVA markers 247–61 to 238–50 and 238–51 to 238–52. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest and wetlands. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered.

Wetlands are present along portions of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-184. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NE
TVA D–Stage Map Numbers	238 and 247
Stream Mile and Bank	TRM 164L
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	A portion of XGIR–703
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 185 – (7.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small linear parcel is located along Turnbo Creek. Access to the parcel is available by boat only. Due to its small size and limited access, this parcel receives very little public use. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. There is a high probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-185. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NE
TVA D–Stage Map Numbers	247
Stream Mile and Bank	TRMs 164.3–164.5L
Land Use/Land Cover	Riparian vegetation
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Partners	None identified

Parcel 186 – (6.1 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This narrow linear parcel is located along Turnbo Creek. Access to this parcel is available by boat only. A small portion of this parcel is under a revocable license to Martin's Landing Homeowner's Association give the public access and permission to use an existing boat ramp. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. No federally or state-listed species are known to occur on this parcel. There is a high probability for the presence of cultural resources. The existing boat ramp is the only shoreline improvement present, and requests for private water use facilities would not be considered.

Table 4-186. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NE
TVA D–Stage Map Numbers	247
Stream Mile and Bank	TRMs 164.1–164.5L
Land Use/Land Cover	Riparian vegetation
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license to Martin's Landing Homeowners Association for a public launching ramp
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 187 – (0.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is contains a navigational light at TRM 164L. The neighboring parcels and backlying land use/land cover are residential and maintained lawns. There is a moderate probability for the presence of cultural resources. Future development of this tract will be restricted, and requests for private water use facilities would not be considered.

Table 4-187. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NE
TVA D–Stage Map Numbers	246 and 247
Stream Mile and Bank	TRM 164L
Land Use/Land Cover	Maintained lawns
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 188 – (44.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the Tennessee River and upstream of Martin Landing. Access to this parcel is readily available via public roads and boat. Due to its close proximity to a public recreation area, this parcel provides the public with multiple opportunities for dispersed recreation. Historically, this parcel has received extensive unauthorized ATV use. This parcel is predominantly early successional forest with significant wetlands present along portions of the shoreline. There is a high probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-188. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NE
TVA D–Stage Map Numbers	238 and 247
Stream Mile and Bank	TRMs163.8–164.3L
Land Use/Land Cover	Mixture of early successional forest and scrub-shrub wetlands, and open grassland
Known Dispersed Recreation Opportunities	Hunting and bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Establishment of native warm season grasses • Mitigate All Terrain Vehicle usage impacts
Potential Partners	None identified

Parcel 189 – (7.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River and extends between TVA markers 238–53 to 238–55. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest and grasslands. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. There are navigation restrictions fronting this parcel. Potential impacts to navigation or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-189. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NE
TVA D–Stage Map Numbers	238
Stream Mile and Bank	TRM 163.8L
Land Use/Land Cover	Deciduous forest and grasslands
Fronts Former TVA Tract (s)	A portion of XGIR–703
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 190 – (2.6 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This narrow linear parcel is located near Martin Landing in Decatur County, Tennessee. The parcel is accessible by boat only; however, public use of this area is very limited because of its small size and proximity to shoreline development. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. No federally or state-listed species are known to occur on this parcel. There is a high probability for the presence of cultural resources. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new water use facilities would not be considered.

Table 4-190. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NE
TVA D–Stage Map Numbers	238
Stream Mile and Bank	TRMs 163.4–163.7L
Land Use/Land Cover	Riparian vegetation
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 191 – (4.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the Tennessee River and slightly downstream of Martin Landing. Access to this parcel is available through public roads and by boat. Due to its small size and proximity to shoreline development, this parcel receives very little public use. This parcel is predominantly deciduous forest with some wetlands present along portions of the shoreline. There is a high probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are

determined to be violations. However, requests for new water use facilities would not be considered.

Table 4-191. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NE
TVA D–Stage Map Numbers	238
Stream Mile and Bank	TRM 163.3–163.4L
Land Use/Land Cover	Mixture of deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 192 – (164.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This relatively large parcel is located near the mouth of Penny Slough and is bisected by TSR 114. Access to the parcel is available through public roads and by boat. The land cover of the majority of this parcel is high quality forested wetlands. This parcel contains a small amount of quality waterfowl production and resting/feeding habitat. There is also habitat capable of supporting a limited number of wetland wildlife species. In addition, this parcel is capable of supporting a variety of small game making this parcel attractive to hunters. Historically, this parcel has received extensive unauthorized ATV use. A small portion of this parcel is under a permanent easement to support utilities and access to the adjacent campground. There is a high probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-192. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	33–NW
TVA D–Stage Map Numbers	244
Stream Mile and Bank	TRMs 157.5–158.1L
Land Use/Land Cover	Forested wetlands, scrub-shrub wetlands, deciduous forest, and pine forest
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Permanent easement to support utilities and access to the adjacent campground
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Mitigate All Terrain Vehicle usage impacts • Wetlands protection
Potential Partners	None identified

Parcel 193 – (2.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel, formerly used as a ferry landing, has been licensed to the TWRA for public recreation. The site has been converted to a boat ramp and parking lot. Future expansion of facilities could be accommodated on the parcel. There is a high probability for the presence of cultural resources on the undeveloped area. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-193. Parcel Information

Location Component	Parcel Specific Information
County, State	Decatur, Tennessee
TVA D–Stage Map Numbers	244
Stream Mile and Bank	TRM 157.7L

Parcel 194 – (44.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is comprised of two islands, also known as Double Islands, and located near Halifax Hollow. The majority of this parcel is covered in deciduous forest with significant emergent,

herbaceous wetlands along portions of the shoreline. Access to this parcel is available by boat only. These islands are known to receive extensive dispersed recreation use, specifically camping. In addition, the vegetation present provides habitat for several species. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-194. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NE
TVA D–Stage Map Numbers	237
Stream Mile and Bank	TRMs148.6–149.4L
Land Use/Land Cover	Deciduous forest, forested wetlands, and emergent/herbaceous wetlands
Known Dispersed Recreation Opportunities	Hunting, camping, and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Assess islands for stabilization needs • Conduct a survey for wading/water bird nesting use • Conduct dispersed recreation inventory and impact assessment
Potential Partners	None identified

Parcel 195 – (0.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small isolated parcel is comprised of two distinct tracts of land and is located along John Yarbro Branch. The majority of this parcel is covered in deciduous forest with forested wetlands along the shoreline. Access to the parcel is limited to boat only. Due to its small size and limited access, public use is limited on this parcel. There is a low probability for the presence of cultural resources. No federally or state-listed species are known to be present on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-195. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NE
TVA D–Stage Map Numbers	233
Stream Mile and Bank	TRM 147.7L
Land Use/Land Cover	Deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Potential hunting
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 196 – (3.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small linear parcel fronts Yarbro Landing. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Access to the parcel is limited to boat only. Due to its small size and limited access, public use is limited on this parcel. There is a high probability for the presence of cultural resources on this parcel. No federally or state-listed as listed endangered, threatened or special status species are known to be present on the parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-196. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NE and 33–NW
TVA D–Stage Map Numbers	233
Stream Mile and Bank	TRM 147.0L
Land Use/Land Cover	Riparian vegetation
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Assess shoreline for stabilization needs
Potential Partners	None identified

Parcel 197 – (29.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along Whites Creek. Decatur County Road 1758 (Whites Creek Road) bisects the parcel. Historically, embankment plantings were established on portions of this parcel to protect the relocated road ROW from erosion. Access to this parcel is readily available by both boat and public roads. An informal boat ramp and gravel parking area were developed by TVA in response to public use. There is a moderate probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on the parcel. Requests for private water use facilities would not be considered.

Table 4-197. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	32–SW
TVA D–Stage Map Numbers	229
Stream Mile and Bank	TRMs 144.2–144.7L
Land Use/Land Cover	Historic bottomland tree plantings and forested wetlands
Known Dispersed Recreation Opportunities	Hunting, camping, and fishing
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Mitigate dispersed recreation impacts • Embankment planting research
Potential Partners	None identified

Parcel 198 – (0.8 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Decatur County, Tennessee, and contains a portion of Decatur County Road 1758. Requests for private water use facilities would not be considered.

Table 4-198. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	32–SW
TVA D–Stage Map Numbers	229
Stream Mile and Bank	White Oak Creek Mile 1.8L
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Decatur County, Tennessee for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 199 – (2.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small linear parcel is located along the upper end of Whites Creek. This parcel serves as a visual buffer and provides numerous riparian habitat functions. Due to limited access and small size, this parcel receives very little public use. There is a low probability for the presence of cultural resources, but the area has not been surveyed. No federally or state-listed species are known to be present on the parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-199. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	230
Stream Mile and Bank	TRM 144.0L
Land Use/Land Cover	Riparian vegetation
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 200 – (22.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of Whites Creek. Historically, the majority of this parcel was in a revocable license for agricultural purposes, therefore a large portion of the parcel is covered in early successional forest. In addition, embankment plantings were established on portions of this parcel. Access is available by boat and potentially through a small public road along a portion of the boundary. There is a moderate probability for the presence of cultural resources. No federally or state-listed species are known to be present on the parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-200. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE and 32–SW
TVA D–Stage Map Numbers	229
Stream Mile and Bank	TRMs 143.5–143.8L
Land Use/Land Cover	Early successional forest and historical hardwood tree plantings
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Embankment planting research
Potential Partners	None identified

Parcel 201 – (2.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of a small island, known as Kellys Island, located near the former Gumdale Dewatering Area. The majority of this parcel is covered with high quality, forested wetlands. Access to the parcel is available by boat only. Due to the limited access and size of the parcel, public use is limited. There is a low probability for the presence of cultural resources. No federally or state-listed as listed endangered, threatened or special status species are known to

be present on the parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-201. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	32–SW
TVA D–Stage Map Numbers	229
Stream Mile and Bank	TRM 143.1L
Land Use/Land Cover	Forested wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Assess island for shoreline stabilization needs • Conduct survey for nesting wading/water bird use
Potential Partners	None identified

Parcel 202 – (218.4 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This large parcel is contains TVA's former Gumdale Dewatering Unit. The Gumdale Dewatering Unit consisted of 2,600 linear feet of levees, one spillway, and approximately 6.5 miles of internal drainage ditches. In February 2012, the non–operating pump house was removed and the levee was breached allowing the area to fluctuate with Kentucky Reservoir water levels. Due to the presence of the former dewatering unit on this parcel, there are several high quality wetlands present. Access to the parcel is readily available either by boat or by public roads. The parcel does receive substantial use by the public for hunting, fishing, and wildlife/scenic viewing opportunities. TVA constructed a parking area for public use at the old pump house site. No federally or state-listed species are known to occur on the parcel. However, a federally listed mussel species is present in the river adjacent to the parcel. In addition, there is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-202. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	32–SW

Location Component and Public Involvement Opportunities	Parcel Specific Information
TVA D–Stage Map Numbers	226 and 229
Stream Mile and Bank	TRMs 143.0–144.1L
Land Use/Land Cover	Historic hardwood tree plantings, forested wetlands, scrub-shrub wetlands, emergent wetlands, bottomland forest, and agricultural
Known Dispersed Recreation Opportunities	Hunting, fishing, wildlife observation, photography
Current Agreements/Commitments	Term agricultural license for sharecrop purposes
Potential Projects	Enhance area for wildlife observation opportunities
Potential Partners	• Agricultural licensee • Tennessee Wildlife Resources Agency

Parcel 203 – (17.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along Halabough Branch. Decatur County Road 1758 (Visetown Road) bisects the parcel. Historically, embankment plantings were established on portions of this parcel to protect the relocated road ROW from erosion. Deciduous forest covers the majority of this parcel; however, significant high quality forested wetlands also occur on portions of the parcel. Access is readily available through the adjacent public road giving the public opportunity to hunt this parcel. No federally or state-listed as listed endangered, threatened or special status species are known to occur on the parcel. In addition, there is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-203. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	32–SW
TVA D–Stage Map Numbers	229
Stream Mile and Bank	TRM 143.0L
Land Use/Land Cover	Deciduous forest, forested wetlands, and historic bottomland tree plantings
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Embankment planting research • Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 204 – (39.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along Crane Hollow Branch. Decatur County Road 1758 (Visetown Road) bisects the parcel. Historically, embankment plantings were established on portions of this parcel to protect the relocated road ROW from erosion. Deciduous forest covers the majority of this parcel; however, significant high quality forested wetlands also occur on portions of the parcel. Access is readily available through the adjacent public road giving the public opportunity to hunt this parcel. No federally or state-listed species are known to occur on this parcel. In addition, there is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-204. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	225 and 226
Stream Mile and Bank	TRM 140.4L
Land Use/Land Cover	Deciduous forest, forested wetlands, and historic bottomland tree plantings
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Embankment planting research • Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 205 – (4.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Decatur County, Tennessee, and contains a portion of Decatur County Road 1758. Requests for private water use facilities would not be considered.

Table 4-205. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	225 and 226
Stream Mile and Bank	TRM 140.5L
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Decatur County, Tennessee for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 206 – (668.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is located along the Tennessee River and south of Beech River. Access to the parcel is readily available either through public roads or by boat. This parcel contains TVA's Perryville Dewatering Unit (Sub–section 2.3.2). The Perryville Dewatering Unit is currently operated for fishing and hunting benefits through the manipulation of its sluice gate only; the pumps are no longer in operation. The Perryville Dewatering Unit is operated to provide a relatively steady summer pool elevation for the adjacent campground through the summer and fall.

Much of this parcel is prime farmland, and approximately 80 acres are under a term agricultural license for perennial hay. Currently, TVA is collaborating with the licensees to convert existing hayfields to native warm season grasses enhancing habitat for wildlife dependent on grassland/early–successional habitats. Several high quality wetlands present provide excellent habitat and nesting sites for a variety of waterfowl and other wetland wildlife species. No federally or state-listed species are known to occur on this parcel. However, there is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-206. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	210 and 222
Stream Mile and Bank	TRMs 135.5–138.8L
Land Use/Land Cover	Historic hardwood tree plantings, forested wetlands, emergent wetlands, scrub-shrub wetlands, perennial hay/grasslands, and bottomland hardwood forest
Known Dispersed Recreation Opportunities	Hunting, photography, wildlife observation, and fishing
Current Agreements/Commitments	Two term agricultural licenses for perennial hay
Potential Projects	• Conversion of perennial hay to native warm season grass habitat • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Restore dewatering unit to full potential • Enhance wildlife observation opportunities
Potential Partners	• Tennessee Wildlife Resources Agency • Agricultural licensees

Parcel 207 – (1.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains the levees and pump house associated with the Perryville Dewatering Unit. The backlying land is used to support the dewatering unit. Requests for private water use facilities would not be considered.

Table 4-207. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	210
Stream Mile and Bank	TRMs 135.9–136.8L
Land Use/Land Cover	Pump house and levee
Known Dispersed Recreation Opportunities	Hunting, photography, wildlife observation, and fishing
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 208 – (25.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel was originally developed and managed by TVA. However, this area is now under a 30-year term easement (Tract No. XTGIR-153RE) to Decatur County, Tennessee, for public recreation. The area is located near the Decaturville–Perryville Road and along the Beech River. There is a high probability for the presence of cultural resources. The area includes a campground, picnic area, boat ramp, and play equipment. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-208. Parcel Information

Location Component	Parcel Specific Information
County, State	Decatur, Tennessee
TVA D–Stage Map Numbers	210
Stream Mile and Bank	TRM 135.7L

Parcel 209 – (16.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is comprised of several small islands and located within Beech River. Bottomland forest covers the majority of this parcel. Access to the parcel is available by boat only. These islands receive some hunting from the public. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-209. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	210
Stream Mile and Bank	TRMs 136.2–136.5L
Land Use/Land Cover	Bottomland hardwood forest and forested wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Conduct a dispersed recreation inventory and assessment • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Assess islands for use by nesting wading/water birds
Potential Partners	None identified

Parcel 210 – (23.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small isolated parcel is located along Lost Creek and is bisected by TSR 100. Historically, embankment plantings were established on portions of this parcel to protect the relocated road ROW from erosion. Bottomland forest covers the majority of this parcel with some wetlands present along the northern boundary. Access to the parcel is available through public roads. Due to the parcel's size and location, limited public use occurs; however, some hunting may occur by local residents. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-210. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	221
Stream Mile and Bank	Beech River Mile 5.0R
Land Use/Land Cover	Historic bottomland hardwood tree plantings and forested wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Conduct embankment planting research • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Refresh the existing paint denoting TVA's property boundaries
Potential Partners	None identified

Parcel 211 – (2.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Decatur County, Tennessee, and contains a portion of TSR 100. Requests for private water use facilities would not be considered.

Table 4-211. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	221
Stream Mile and Bank	TRM 140.5L
Land Use/Land Cover	Road right–of–way and historic hardwood tree plantings
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Decatur County, Tennessee for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 212 – (52.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This isolated parcel is located along Rushing Creek, a tributary to Beech River, and is bisected by TSR 100. Historically, this parcel was managed to protect the public road ROW. Bottomland forest covers the majority of this parcel with significant high quality wetlands present along the northern portion of the parcel. Beaver ponds are also found in this area. Access to the parcel is available through public roads. Due to the parcel's size and location, limited public use occurs; however, some waterfowl hunting may occur by local residents. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-212. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	221
Stream Mile and Bank	Beech River Mile 7.2R
Land Use/Land Cover	Bottomland hardwoods, forested wetlands, and beaver ponds
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Refresh the existing paint denoting TVA's property boundaries
Potential Partners	None identified

Parcel 213 – (3.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Decatur County, Tennessee, and contains a portion of TSR 100. Requests for private water use facilities would not be considered.

Table 4-213. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	221
Stream Mile and Bank	TRM 140.5L
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Decatur County, Tennessee for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 214 – (2.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small isolated parcel is located along Beech River and adjacent to TSR 100/69 Bridge. Historically, this parcel was managed to protect the public road ROW. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Access to the parcel is available through public roads; however, due to the parcel's size and location, limited public use occurs. No federally or state-listed species are known to occur on the parcel. There is a low probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-214. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	220
Stream Mile and Bank	Beech River Mile 10R
Land Use/Land Cover	Bottomland hardwoods and riparian vegetation
Known Dispersed Recreation Opportunities	Limited hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Refresh the existing paint denoting TVA's property boundaries
Potential Partners	None identified

Parcel 215 – (21.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small isolated parcel is located along Turkey Creek, a tributary to Beech River. The land cover of the majority of this parcel is hardwood forest with significant wetlands present along portions of the parcel. Access to the parcel is limited; therefore, very little public use occurs on this small parcel. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-215. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SW
TVA D–Stage Map Numbers	212
Stream Mile and Bank	Beech River Mile 13.2R
Land Use/Land Cover	Bottomland hardwoods and forested wetlands
Known Dispersed Recreation Opportunities	Limited hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Refresh the existing paint denoting TVA's property boundaries
Potential Partners	None identified

Parcel 216 – (33.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small isolated parcel is located along Turkey Creek, a tributary to Beech River. Historically, embankment plantings were established on portions of this parcel. The land cover of the majority of this parcel is hardwood forest with significant wetlands present along portions of the parcel. Access to the parcel is limited; therefore, very little public use occurs on this small parcel. No federally or state-listed as listed endangered, threatened or special status species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-216. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SW
TVA D–Stage Map Numbers	219
Stream Mile and Bank	Beech River Mile 13.5R
Land Use/Land Cover	Bottomland hardwoods, forested wetlands, and historic hardwood tree plantings
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Refresh the existing paint denoting TVA's property boundaries
Potential Partners	None identified

Parcel 217 – (1.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Decatur County, Tennessee, and contains a portion of TSR 202. Requests for private water use facilities would not be considered.

Table 4-217. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SW
TVA D–Stage Map Numbers	219
Stream Mile and Bank	Beech River Mile 13.5R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Decatur County, Tennessee for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 218 – (77.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This isolated parcel is comprised of three tracts of land with TSR 202 separating two of the tracts. All three tracts of land are located along Beech River and near the Henderson County and Decatur County, Tennessee, line. Historically, embankment plantings were established on portions of this parcel. The land cover of the majority of this parcel is hardwood forest. Portions of this parcel are also impacted by beaver dams; therefore, extensive flooding occurs resulting in significant high quality wetlands along portions of this parcel. However, due to this parcel's distance from the main reservoir, very little public use occurs. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of

cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-218. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SW
TVA D–Stage Map Numbers	218
Stream Mile and Bank	Beech River Miles 15.8–16.4B
Land Use/Land Cover	Historic bottomland hardwood tree plantings, forested wetlands, and beaver dams
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Refresh the existing paint denoting TVA's property boundaries • Embankment planting research
Potential Partners	None identified

Parcel 219 – (2.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Decatur County, Tennessee, and contains a portion of TSR 202. Requests for private water use facilities would not be considered.

Table 4-219. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SW
TVA D–Stage Map Numbers	218
Stream Mile and Bank	Beech River Mile 16.4B
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Decatur County, Tennessee for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 220 – (19.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small isolated parcel is comprised of two tracts of land and located along Bear Creek, a tributary to Beech River. The tracts of land are separated by Tomlin Chapel Road. Historically, embankment plantings were established on portions of this parcel. The land cover of the majority of this parcel is bottomland hardwood forest. Public use of this parcel is limited due to the small parcel size; however, some local residents may use this property for hunting. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-220. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SW
TVA D–Stage Map Numbers	212
Stream Mile and Bank	Beech River Mile 14.4L
Land Use/Land Cover	Historic bottomland hardwood tree plantings
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Refresh the existing paint denoting TVA's property boundaries • Embankment planting research
Potential Partners	None identified

Parcel 221 – (0.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Decatur County, Tennessee, and contains a portion of Tomlin Chapel Road and Lewis Welch Road. Requests for private water use facilities would not be considered.

Table 4-221. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SW
TVA D–Stage Map Numbers	212
Stream Mile and Bank	Beech River Mile 14.4L
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Decatur County, Tennessee for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 222 – (1.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel adjoins a portion of former TVA Tract No. XGIR-534 sold under Section 31 of the TVA Act to the City of Parsons. The area is located along the left descending bank of Beech River and is adjacent to TSR 100. Outdoor sports fields associated with a public school have been developed on a portion of this parcel, and some additional recreation related development could be considered in the future.

Table 4-222. Parcel Information

Location Component	Parcel Specific Information
County, State	Decatur, Tennessee
TVA D–Stage Map Numbers	212
Stream Mile and Bank	Beech River Mile 10.1L

Parcel 223 – (5.5 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This small parcel is located entirely below the 375-foot contour msl and adjacent to the Beech River. A water treatment plant is located on the backlying property. The City of Parsons, Tennessee, has installed a waterline on this parcel, and at least two unimproved roads are present. There is a moderate probability for the presence of cultural resources. A site-specific environmental review will be conducted prior to any ground disturbance. Requests for use of

TVA lands and associated water–based structures to support industrial purposes would be considered.

Table 4-223. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	212
Stream Mile and Bank	Beech River Mile 10L
Land Use/Land Cover	Deciduous forest and scrub-shrub
Current Agreements/Commitments	None identified

Parcel 224 – (135.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This relatively large parcel is comprised of three tracts of land located along the left descending bank of the Beech River. The majority of the parcel is covered with deciduous forest. However, significant high quality emergent and scrub-shrub wetlands occur on portions of the parcel. Access is available by boat and via a public road on the eastern most portion of the parcel. A small portion of this parcel is under a linear revocable license to support both electric and water utilities. This parcel supports a limited variety of small and large game species and frequently attracts high numbers of wintering waterfowl. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-224. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	210
Stream Mile and Bank	Beech River Miles 1.9–3.0L
Land Use/Land Cover	Deciduous forest, emergent wetlands, scrub-shrub wetlands, and early to mid–successional vegetation
Known Dispersed Recreation Opportunities	Hunting and wildlife observation

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Revocable License to Lexington Electric Systems (Electric Utilities) • Revocable License to Perryville Utility District (Water Utilities)
Potential Projects	Possible conversion of former agricultural area into native warm season grass management
Potential Partners	None identified

Parcel 225 – (12.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel borders Tract No. XTGIR-18 that TVA previously transferred to the State of Tennessee for public recreation. The area is located along the left descending bank of the Beech River and is accessible from the Decaturville–Perryville Road. TWRA maintains a boat ramp and parking lot on the property. There is a high probability for the presence of cultural resources in the undeveloped areas. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-225. Parcel Information

Location Component	Parcel Specific Information
County, State	Decatur, Tennessee
TVA D–Stage Map Numbers	210
Stream Mile and Bank	Beech River Mile 2L

Parcel 226 – (16.2 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel is located at the confluence of the Beech and Tennessee rivers. This parcel is the site of the original town of Perryville and has historic significance. The land cover of the majority of the parcel is dominated by deciduous forest; however, scrub-shrub wetlands occur along portions of the shoreline. Access is available by boat and by use of a public road that is adjacent to the property. A small portion of this parcel is under a permanent easement to support local utilities and to support the public road. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-226. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	210–2
Stream Mile and Bank	TRM 135.6L
Land Use/Land Cover	Deciduous forest and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	• Permanent easement to the Tennessee Department of Transportation for a roadway • Permanent easement to the City of Parsons for utilities
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Monitor for encroachment
Potential Partners	None identified

Parcel 227 – (0.8 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains the Perryville Navigational Light at TRM 135.7L. The neighboring parcels and backlying land use/land cover are industrial and deciduous forest. There is a high probability for the presence of cultural resources in the undamaged areas. Future development of this tract will be restricted and requests for private water use facilities would not be considered.

Table 4-227. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	210–2
Stream Mile and Bank	TRM 135.7L
Land Use/Land Cover	Industrial
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 228 – (4.6 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is located near the area of Perryville, Tennessee, and adjacent to the Tennessee River. Currently, the entirety of this parcel is an industrial site and under a revocable license to Tinker Sand and Gravel, Incorporated. Requests for continued use of TVA lands and associated water–based structures to support industrial purposes would be considered.

Table 4-228. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE
TVA D–Stage Map Numbers	210–2
Stream Mile and Bank	TRM 135.6L
Land Use/Land Cover	Industrial
Current Agreements/Commitments	Revocable license to Tinker Sand and Gravel, Incorporated for a barge terminal

Parcel 229 – (2.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located near the confluence of the Tennessee River and Alley Branch. The majority of the parcel is covered with deciduous forest. This parcel is separated from the reservoir by a public road and by Perryville Marina. Access is available by public road only; however, public use is limited due to size and proximity to nearby developed areas. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-229. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–SE and 22–NE
TVA D–Stage Map Numbers	210–1
Stream Mile and Bank	TRM 135.1L

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 230 – (31.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located adjacent to US Route 412. The area is under revocable license agreements to Perryville Marina, LLC for commercial recreation. A portion of the parcel, located along the right descending bank of Alley Branch, is used primarily for boat moorage. The portion of the parcel, located along the left descending bank of Alley Branch, has been developed for camping and marina related services. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-230. Parcel Information

Location Component	Parcel Specific Information
County, State	Decatur, Tennessee
TVA D–Stage Map Numbers	208
Stream Mile and Bank	TRM 135L

Parcel 231 – (35.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along both banks of Alley Branch and is bisected by TSR 20/100. The majority of the parcel is covered by deciduous forest with some forested wetlands present along the shoreline. Access to the parcel is readily available by public road and by boat; however, public use is limited due to size of the parcel and proximity to nearby development. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-231. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	208
Stream Mile and Bank	TRM 134.8L
Land Use/Land Cover	Deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Hunting and bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 232 – (1.6 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is located near the area of Perryville, Tennessee, and adjacent to the Tennessee River. Currently, an approximate 0.3–acre portion of this parcel is under a revocable license to Koch Materials for an industrial site. The remainder of the parcel remains in deciduous forest. Requests for use of TVA lands and associated water–based structures to support industrial purposes would be considered.

Table 4-232. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	207 and 208
Stream Mile and Bank	TRM 134.9L
Land Use/Land Cover	Deciduous forest and industrial site
Current Agreements/Commitments	Revocable license to Koch Materials for an industrial site

Parcel 233 – (1.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River and extends between TVA markers 208–65 to 208–51. This parcel lies entirely below the 375-foot msl, and

the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Alley Bluff Small Wild Area is located on nearby Parcel 234 which included Featherfoot cave, a priority 2 cave in the gray bat recovery plan and a known maternity roost location. Habitat for gray bat foraging exists within this area and the adjacent Parcel 234. Another cave exists on this parcel as well though no rare species have been documented inside. Potential impacts to the small wild area, habitat for bat foraging, or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-233. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	23–NE
TVA D–Stage Map Numbers	208
Stream Mile and Bank	TRM 134.9L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–633 and XGIR–691
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 234 – (54.5 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

The parcel is located along the Tennessee River and in slightly downstream of Pikes Peak Branch. Alley Bluff Habitat Protection Area is located on the parcel. This parcel contains a riparian corridor of deciduous hardwood forests and a large overhanging limestone bluff with numerous small cracks and crevices. In addition, Featherfoot cave provides habitat for a summer maternity colony of the federally listed gray bat (*Myotis grisescens*). A memorandum of understanding exists between TVA and TWRA for provision of law enforcement at the cave entrance. Habitat for gray bat foraging exists within the adjacent Parcels 101 and 233. Currently, TVA is a reviewing potential 30 acre expansion of the habitat protection area into Parcel 101. This expansion would include the forested area that contains potential foraging habitat.

Access and public use of the parcel are limited due to steep topography. A cave gate has been placed at the entrance of the cave to prevent intruders and minimize bat disturbance. In addition

to the gray bat habitat, there is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-234. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Kentucky
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	208
Stream Mile and Bank	TRMs 133.6–134.5L
Land Use/Land Cover	Mixed pine/hardwood forest and limestone bluffs
Known Dispersed Recreation Opportunities	Wildlife and scenic observation
Current Agreements/Commitments	• Memorandum of Understanding with Tennessee Wildlife Resources Agency for provision of limited law enforcement at Featherfoot cave • Protection for federally listed species
Potential Projects	• Expansion of HPA northward to include an additional 30 acres • Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Monitor and maintain gate at Featherfoot cave
Potential Partners	• U.S. Fish and Wildlife Services • Tennessee Wildlife Resources Agency

Parcel 235 – (18.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is adjacent to Tract No. XTGIR-16 that TVA previously transferred to the State of Tennessee for public recreation. Access to the parcel is via Brodie's Landing Road. TWRA maintains a boat ramp and parking lot on this parcel. In the undeveloped areas, there is a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-235. Parcel Information

Location Component	Parcel Specific Information
County, State	Decatur, Tennessee
TVA D–Stage Map Numbers	197
Stream Mile and Bank	TRM 128.3L

Parcel 236 – (1.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is contains the Brodie's Landing Navigational Light at TRM 128.1L. The neighboring parcels and backlying land use are deciduous forest and residential. There is a moderate probability for the presence of cultural resources. Future development of this tract will be restricted and requests for private water use facilities would not be considered.

Table 4-236. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	197
Stream Mile and Bank	TRM 128.1L
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 237 – (133.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This relatively large parcel is comprised of several tracts of land. The parcel spans a portion of both banks of Lick Creek and includes all the islands within the Lick Creek embayment. The majority of the parcel is covered by deciduous forest with significant high quality scrub-shrub and forested wetlands present along portions of the shoreline. Small portions of this parcel are under linear revocable licenses to support electric utilities and public road ROW. Access to the parcel is available by boat or public road. The parcel provides multiple dispersed recreational opportunities including camping along the reservoir shoreline. In 2009, TVA conducted a dispersed recreation inventory and identified five dispersed recreation sites on this parcel at the

mouth of Lick Creek. Impacts at these sites were minimal at the time and no mitigation efforts were necessary. This parcel contains a limited amount of prime waterfowl production and resting/feeding habitat and habitat capable of supporting a limited number of wetlands wildlife species. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources along the portions of the parcel adjacent to main reservoir shoreline. There is a moderate probability for the presence of cultural resources along portions of the parcel adjacent to and within the Lick Creek embayment. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new water use facilities would not be considered.

Table 4-237. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	197
Stream Mile and Bank	TRMs 127.3–128.1L
Land Use/Land Cover	Deciduous forest, forested wetlands, and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Hunting, bank fishing, camping, and wildlife observation
Current Agreements/Commitments	• Revocable license to Lexington Electric Systems for electric utilities • Revocable license to Decatur County Highway Department for public road
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Mitigate impacts associated with dispersed recreation
Potential Partners	None identified

Parcel 238 – (48.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two tracts of land and is located along the left descending bank of the Tennessee River and along Lick Creek. This parcel extends between TVA markers 197–70 to a point approximately 275 feet from TVA marker 197–32. This parcel lies mostly below the 375-foot msl, and the current land use is deciduous forest and maintained lawn. Kirby Subdivision is

located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4-238. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	197
Stream Mile and Bank	TRM 127.6L
Land Use/Land Cover	Deciduous forest and maintained lawn
Fronts Former TVA Tract (s)	XGIR–524
Structure Profile	Varies
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to Lexington Electric System for electric utilities

Parcel 239 – (11.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River within the Lick Creek embayment and extends between TVA markers 39 to 196–28. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest and wetlands. One cave occurs within 200 feet of this parcel. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Wetlands are present along the entirety of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-239. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	196 and 197
Stream Mile and Bank	TRM 127.6L
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	XGIR–523 and XGIR–685
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 240 – (82.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This predominantly bottomland hardwood parcel is located at the upper end of Lick Creek embayment. In addition to bottomland hardwoods, this parcel also contains diverse and high quality scrub-shrub and emergent wetlands. This parcel contains a limited amount of prime waterfowl production, resting/feeding habitat, and habitat capable of supporting a limited number of wetlands wildlife species. Access to the parcel is available by boat only. Due to access issues, public use is probably limited to hunting. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-240. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	196
Stream Mile and Bank	TRM 127.0L
Land Use/Land Cover	Deciduous forest; forested, scrub-shrub and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetlands protection and management
Potential Partners	None identified

Parcel 241 – (91.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts located along the left descending bank of the Tennessee River within the Lick Creek embayment. This parcel extends among TVA markers 37 to 38 and 196–24 to 44. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest, maintained lawn, and wetlands. Millers Point Subdivision and one unnamed subdivision are located on the backlying private property. Water use facilities have

been constructed along the shoreline, and future requests for private water use facilities would be considered. High quality wetlands are present from Millers Point Subdivision towards the headwaters of Lick Creek. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-241. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	196 and 197
Stream Mile and Bank	TRM 127.6L
Land Use/Land Cover	Deciduous forest, maintained lawn, and wetland
Fronts Former TVA Tract (s)	XGIR–522, XGIR–578, XGIR–601, XGIR–602 and XGIR–684
Structure Profile	Varies
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to Lexington Electric System for electric utilities

Parcel 242 – (4.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel, located near the mouth of the Lick Creek, is currently undeveloped. However, the area is informally used for boat launching, shoreline fishing, and other water based recreation activities. The parcel, known locally as Bohannon's Landing, is accessible from Decatur County Road 1741. Potential future public recreation development could include a boat ramp, shoreline fishing area, and picnic or camping facilities. There is a high probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-242. Parcel Information

Location Component	Parcel Specific Information
County, State	Decatur, Tennessee
TVA D–Stage Map Numbers	197
Stream Mile and Bank	TRM 127.5L

Parcel 243 – (6.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River within the Ricketts Creek embayment. This parcel extends between TVA markers 81 to 82. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest and wetlands. Water use facilities have not been constructed along the shoreline; however, one active approval for a floating boathouse exists. Future requests for private water use facilities would be considered. Wetlands are present along portions of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-243. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE
TVA D–Stage Map Numbers	197–D
Stream Mile and Bank	TRM 127.3L
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	XGIR–683
Structure Profile	Elevation 382–foot mean sea level
Current Agreements/Commitments	Approval for a private water use facility

Parcel 244 – (6.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is Denson Island and is located within the Tennessee River and upstream of Saulpaws Landing. The land cover of the parcel is predominantly deciduous forest, and some wetlands may occur along the shoreline. Access to the parcel is available by boat only. Due to limited access and small parcel size, public use is limited. No federally or state-listed species are known to occur on the parcel. However, the parcel may be used by foraging bald eagles. There is a low probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-244. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	22–NE and 22–SE
TVA D–Stage Map Numbers	195
Stream Mile and Bank	TRMs 125.2–125.7L
Land Use/Land Cover	Deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Conduct a survey for nesting wading/water bird use • Conduct a dispersed recreation assessment
Potential Partners	None identified

Parcel 245 – (53.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This relatively isolated parcel is located near Saulpaws Landing and across the Tennessee River from Toms Creek. The land use of the majority of this parcel consists of perennial hayfield. A small area of scrub-shrub and forested seasonal wetlands is present near the middle of the property, and a narrow shoreline riparian zone is present. This parcel contains a small amount of quality waterfowl habitat and limited wetlands wildlife habitat. Access is available by boat and a public road that borders the northwestern edge of property. A portion of the parcel is currently under a term agricultural license for perennial hay. This parcel is proposed to transition from perennial hay to native warm season grasses. A small portion of this parcel is under a linear revocable license to support electric utilities. There is a high probability for the presence of cultural resources on this parcel. No federally or state-listed species are known to be present on the parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-245. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	31–SW
TVA D–Stage Map Numbers	192
Stream Mile and Bank	TRMs 124.1–124.4L
Land Use/Land Cover	Perennial hay and scrub-shrub and forested wetlands

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Revocable license to Lexington Electric Systems for electric utilities • Term agricultural license for perennial hay
Potential Projects	Possible conversion of agricultural area into native warm season grass management cooperative partnership
Potential Partners	Agricultural/Cooperative Partnership licensee

Parcel 246 – (6.0 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small off–water parcel is located west of the adjacent Parcel 245 and Cotham Town Lane. The land cover of a majority of the parcel is dominated by deciduous forest, but the presence of high quality wetlands warranted the allocation to Sensitive Resource Management. This parcel contains a small amount of quality waterfowl and wildlife habitat. Access to the parcel is available via Cotham Town Lane. A small portion of this parcel is under a linear revocable license to support electric utilities. No federally or state-listed species are known to occur on the parcel. There is a high to moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-246. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	31–SW
TVA D–Stage Map Numbers	192
Stream Mile and Bank	TRM 124.4L
Land Use/Land Cover	Deciduous forest and forested wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	Revocable license to Lexington Electric Systems for electric utilities
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries
Potential Partners	None identified

Parcel 247 – (133.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is located along the left descending bank of Hog Creek. In addition to deciduous forest and hayfields, this parcel also contains forested, scrub-shrub, and emergent wetlands. This parcel contains a limited amount of prime waterfowl resting/feeding habitat and habitat capable of supporting a limited number of wetlands wildlife species. Access to the parcel is available via boat and farm roads; therefore, public use is limited. A portion of this parcel is prime farmland, and approximately 37 acres is currently under a term agricultural license for perennial hay. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-247. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Decatur, Tennessee
Topographic Map (Sheet No. and Quadrant)	31–SW
TVA D–Stage Map Numbers	191 and 192
Stream Mile and Bank	TRMs 121.8–122.3L
Land Use/Land Cover	Deciduous forest, perennial hay, and forested, scrub-shrub and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	Term agricultural license for perennial hay
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetlands protection and management • Continued establishment and conversion to native warm season grasses
Potential Partners	Agricultural Cooperative Partnership Licensee

Parcel 248 – (2.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the mouth of Birdsong Creek and is adjacent to TNWR. In addition to deciduous forest, this parcel also contains forested, scrub-shrub, and emergent wetlands. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Access to the parcel is available by boat only.

Due to its small size and limited access, this parcel receives very little public use. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-248. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	21–NE
TVA D–Stage Map Numbers	168
Stream Mile and Bank	TRM 104.4L
Land Use/Land Cover	Deciduous forest and forested, scrub-shrub and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 249 – (56.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Birdsong Creek and is bisected by TSR 191. Portions of the parcel are under management by three different entities–TWRA; Birdsong Resort, Marina, and Campground; and Wildlife Cove Marina.

The upstream portion of the parcel adjoins Tract No. XTGIR-15 that TVA previously transferred to the State of Tennessee for public recreation. TWRA maintains a boat ramp and parking area on this portion of the parcel. TWRA also maintains a parking lot serving a public fishing pier along the TSR 191 ROW.

Birdsong Resort, Marina, and Campground manages the portion of the parcel that extends between TVA markers 168–25 A–3 and RT 122. This commercial recreation area includes a marina, boat ramp, campground, rental cabins, visitor center, and restaurant.

Wildlife Cove Marina manages the portion of the parcel that extends between TVA markers RT and 168–24A. This commercial recreation area provides for a marina, boat ramp and parking lot.

The undeveloped areas have a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-249. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	168
Stream Mile and Bank	TRM 103.5L

Parcel 250 – (3.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Benton County, Tennessee, and contains a portion of TSR 191. A fishing pier is also located on this parcel with the associated parking area located on parcel 249. Requests for private water use facilities would not be considered.

Table 4-250. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	21–NE
TVA D–Stage Map Numbers	168
Stream Mile and Bank	Birdsong Creek Mile 2R
Land Use/Land Cover	Road right–of–way and fishing pier
Known Dispersed Recreation Opportunities	bank fishing
Current Agreements/Commitments	Permanent easement to Benton County, Tennessee for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 251 – (65.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of nine small noncontiguous tracts and is located along the right descending bank of Birdsong Creek. This parcel extends among TVA markers 120 to 98; 122 to 135; 134 to 133; 131 to 132; 129 to 130; 127 to 128; 126 to 125; 124 to 137; and 136 to 123. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest and wetlands. Only one water use facility has been constructed along the shoreline, and future requests for private water use facilities would be considered. High quality wetlands are present along the entirety of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-251. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	21–NE
TVA D–Stage Map Numbers	168
Stream Mile and Bank	Birdsong Creek Miles 2.7–3.7R
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	XGIR–484, XGIR–577, XGIR–598, and XGIR–599
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approval for one private water use facility • Permanent easement to Benton County, Tennessee for a roadway

Parcel 252 – (54.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is composed of eight noncontiguous tracts of land. In addition to deciduous forest, this parcel also contains significant high quality forested and scrub-shrub wetlands along the majority of the shoreline. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Access to the entirety of the parcel is available by boat, and portions of the parcel have additional public road access. A limited variety of small game and some concentration of big game are present on the parcel. Therefore, dispersed recreation opportunities for both hunting and wildlife observation are also present. No federally or state-listed species are known to occur on the parcel. There is a

moderate probability for the presence of cultural resources, but only a portion of the area has been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-252. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	21–NE
TVA D–Stage Map Numbers	168
Stream Mile and Bank	Bird Song Creek Miles 2.7–3.7R
Land Use/Land Cover	Historic hardwood tree plantings, deciduous forest and forested and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 253 – (225.4 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This large parcel includes three distinct tracts of land and all the islands between Birdsong Creek Miles 3.5 to 4.2. The land cover of this parcel is predominantly deciduous forest; however, significant high quality forested and scrub-shrub wetlands occur along portions of the shoreline. Portions of this parcel are designated for long–term wetland monitoring associated with the Reservoir Operations Study EIS (TVA 2004). This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Public road access is available to portions of this parcel; in addition, forest roads have been established through portions of the parcel to improve accessibility. There are two dispersed recreation sites on two of the islands. In addition to these two sites, the remainder of the parcel is known to receive substantial dispersed recreation use mainly hunting. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but this area has been not surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-253. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	21–NE
TVA D–Stage Map Numbers	166
Stream Mile and Bank	TRM 106.2L
Land Use/Land Cover	Deciduous forest and forested and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Hunting, camping, and wildlife observation
Current Agreements/Commitments	Long–term wetland monitoring associated with TVA's Reservoir Operations Study environmental impact statement
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetland protection • Assess dispersed recreation sites and impacts
Potential Partners	Tennessee Department of Environment and Conservation

Parcel 254 – (11.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Birdsong Creek and extends between TVA markers 102 to 42. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest and wetlands. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. High quality wetlands are present along the entirety of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-254. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	21–NE
TVA D–Stage Map Numbers	166
Stream Mile and Bank	Birdsong Creek Mile 4.1R
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	XGIR–483
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None identified

Parcel 255 – (112.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel includes three distinct tracts of land along the left descending bank between Birdsong Creek Miles 3.5 to 4.2. The land cover of this parcel is predominantly deciduous forest; however, significant high quality forested and scrub-shrub wetlands occur along portions of the shoreline. Public road access is available to portions of this parcel; in addition, forest roads have been established through portions of the parcel to improve accessibility. A limited variety of small game with some concentration of big game is present on the parcel. The shoreline portion of this parcel possesses a limited amount of waterfowl production and wintering habitat. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but this area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-255. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	21–NE
TVA D–Stage Map Numbers	165 and 166
Stream Mile and Bank	Birdsong Creek Miles 4.6–6L
Land Use/Land Cover	Deciduous forest and forested and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Hunting, wildlife observation, and camping/fishing
Current Agreements/Commitments	Long–term wetland monitoring associated with Reservoir Operations Study EIS
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetland protection • Assess dispersed recreation uses and impacts
Potential Partners	Tennessee Department of Environment and Conservation

Parcel 256 – (108.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts located along the left descending bank of Birdsong Creek. This parcel extends among TVA markers 166–43 to 166–45 and 166–46 to 166–44. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest and wetlands. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. High quality wetlands are present along the entirety of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-256. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	21–NE
TVA D–Stage Map Numbers	166
Stream Mile and Bank	Birdsong Creek Miles 4.8–6L
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	XGIR–479, XGIR–480, XGIR–481, and XGIR–482
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None identified

Parcel 257 – (32.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Birdsong Creek and extends between TVA markers 165–13 to Parcel 255. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-257. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	21–NE
TVA D–Stage Map Numbers	165
Stream Mile and Bank	Birdsong Creek Miles 2.7–3.7L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–782
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to Benton County Board of Public Utilities

---

Parcel 258 – (7.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the left descending bank of Birdsong Creek at the confluence of York Branch. The land cover of this parcel is predominantly deciduous forest; however, significant high quality forested and scrub-shrub wetlands occur along portions of the shoreline. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. The parcel is accessible by boat and from adjacent Scout Camp; therefore, public use is limited. A small portion of this parcel is under a linear revocable license to support electric utilities. A limited variety of small game with some concentration of big game is present on the parcel. The shoreline portion of this parcel possesses a limited amount of waterfowl production and wintering habitat. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but this area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-258. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bento, Tennessee
Topographic Map (Sheet No. and Quadrant)	21–NE
TVA D–Stage Map Numbers	165
Stream Mile and Bank	Birdsong Creek Mile 2.7L
Land Use/Land Cover	Deciduous forest and forested and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Revocable License to Board of Public Utilities, Benton County (Electric Utilities)
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetlands protection
Potential Partners	None identified

Parcel 259 – (61.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Birdsong Creek. The backlying property is former TVA property (Tract No. XGIR-298) and was sold via Section 4(k)(a) of the TVA Act to the West Tennessee Area Council of the Boy Scouts of America. The backlying property is currently used as a group camp and future development is restricted to recreational purposes. The shoreline parcel is utilized for water–based activities such as swimming, boating, and fishing. The undeveloped areas have a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-259. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	165
Stream Mile and Bank	Birdsong Creek Miles 2–2.7L

Parcel 260 – (28.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Birdsong Creek and TRM 104. The parcel extends between TVA markers 164–52 to 163–16. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. A portion of TVA-developed Birdsong Creek Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any

resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-260. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	21–NE
TVA D–Stage Map Numbers	163 and 165
Stream Mile and Bank	TRM 103.5L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–474 and XGIR–475
Structure Profile	Varies
Current Agreements/Commitments	Approvals for private water use facilities

---

Parcel 261 – (0.04 acre)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is an island located adjacent to a portion of Birdsong Creek Subdivision. The land cover of this parcel is predominantly deciduous forest; however, significant high quality forested, scrub-shrub, emergent wetlands occur along the shoreline. The parcel is accessible by boat; therefore, public use is very limited. The shoreline portion of this parcel and neighboring parcels possess a limited amount of waterfowl production and wintering habitat. No federally or state-listed species are known to occur on the parcel. There is a low probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-261. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	21–NE
TVA D–Stage Map Numbers	163
Stream Mile and Bank	TRM 103.5L
Land Use/Land Cover	Deciduous forest and forested, scrub-shrub, emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetlands protection
Potential Partners	None identified

Parcel 262 – (3.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Birdsong Creek and extends between TVA markers 163–16 and 163–55. The backlying property is former TVA property (Tract No. XGIR–561) and was sold via Section 31 of the TVA Act with restrictions for use as commercial recreation. The backlying property is currently used by Camden Bay Resort with amenities including a multi–slip dock and boat ramp. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-262. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	163
Stream Mile and Bank	TRM 103.5L

Parcel 263 – (11.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Birdsong Creek at TRM 103.5L. The parcel extends between TVA markers 163–11D to 163–55. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. A portion of TVA–developed Birdsong Creek Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4-263. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	21–NE
TVA D–Stage Map Numbers	163
Stream Mile and Bank	TRM 103.5L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–560
Structure Profile	Varies
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area

Parcel 264 – (9.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel is comprised of an island near the confluence of Birdsong Creek and the Tennessee River. This parcel features predominantly high quality forested, scrub-shrub, and emergent wetlands. This area serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Access to the parcel is by boat; therefore, public use is limited. This parcel is within close proximity to TWRA managed lands to support waterfowl management, and the island lies between the TNWR and Camden Wildlife Management Area (WMA).

No federally or state-listed species are known to occur on this parcel. There is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-264. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	21–NE
TVA D–Stage Map Numbers	154 and 163
Stream Mile and Bank	TRMs 102.2–103.4L
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting/Fishing and wildlife observation
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetlands protection • Monitor dispersed recreation uses and impacts • Shoreline stabilization to protect cultural resources • Inventory for nesting wading/water birds
Potential Partners	• U.S. Fish and Wildlife Service • Tennessee Wildlife Resource Agency

Parcel 265 – (3.7 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel is comprised of several islands adjacent to the Camden Dewatering Area. This parcel features predominantly high quality forested, scrub-shrub, and emergent wetlands. This area serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Access to the parcel is by boat with limited vehicular access to the most downstream portion of this parcel via Camden levee road; therefore, public use is limited.

The shoreline portion of this parcel possesses a limited amount of waterfowl habitat. This parcel is within close proximity to TWRA managed lands to support waterfowl management. The most downstream island has previously had some access from the Camden levee for bank fishing.

No federally or state-listed species are known to occur on this parcel. There is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-265. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	21–NE
TVA D–Stage Map Numbers	154 and 163
Stream Mile and Bank	TRMs 102.2–103.4L
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting/Fishing and wildlife observation

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetlands protection • Monitor dispersed recreation uses and impacts • Shoreline stabilization to protect cultural resources • Inventory for nesting wading/water birds
Potential Partners	• U.S. Fish and Wildlife Service • Tennessee Wildlife Resource Agency

Parcel 266 – (3,642.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel encompasses the Camden Dewatering Unit and is managed by TVA and TWRA. This parcel features a mixture of bottomland forest, forested, scrub-shrub and emergent wetlands; agricultural lands; and open water associated with dewatering activities. Management emphasis is providing waterfowl hunting opportunities from drawn blinds and designated temporary blinds. Other small and big game hunting is allowed outside of the waterfowl season, and the area receives fishing pressures during dewatering operations. Wildlife observation opportunities are also abundant. Although regulated and managed by TWRA, access to this parcel is available by boat or road.

No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but only a portion of the area has been surveyed. Requests for private water use facilities would not be considered.

Table 4-266. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE and 21–NE
TVA D–Stage Map Numbers	150, 153, 154, and 163
Stream Mile and Bank	TRMs 99.7–103.3L
Land Use/Land Cover	Historic hardwood tree plantings, bottomland forest and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, fishing, and wildlife observation

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Revocable licenses to Tennessee Wildlife Resources Agency for limited management of Camden Dewatering Unit and full management of a wildlife management area • Revocable license to Benton County Board of Public Utilities for electric utilities
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetlands protection and enhancement • Monitor dispersed recreation uses and impacts • Cultural Resource exploration and management in cooperation with Tennessee Wildlife Resources Agency's wildlife management objectives • Promote wildlife observation opportunities • Embankment planting research • Explore management opportunities for migratory shorebirds
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 267 – (61.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains the levees and pump house associated with the Camden Dewatering Unit. The backlying land is used to support the dewatering unit. A population of the state endangered species lamance iris (*Iris brevicaulis*), has been recently recorded on this parcel. Requests for private water use facilities would not be considered.

Table 4-267. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE and 21–NE
TVA D–Stage Map Numbers	150, 153, 154, and 163
Stream Mile and Bank	TRMs 99.7–103.3L
Land Use/Land Cover	Pump house and levee
Known Dispersed Recreation Opportunities	Hunting, photography, wildlife observation, and fishing
Current Agreements/Commitments	Revocable license to the Tennessee Wildlife Resources Agency (TWRA) for limited management of the dewatering unit
Potential Projects	None identified
Potential Partners	TWRA

Parcel 268 – (2.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along Camden Landing Road within the area of the Camden Dewatering Unit. TWRA maintains a boat ramp, fishing pier, and parking area at this location. There is a high probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-268. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	154
Stream Mile and Bank	TRM 102.5L

Parcel 269 – (7.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of TRM 100.5. The parcel extends between TVA markers 153–31 to 153–39. This parcel lies entirely below the 375-foot msl, and the current land use/land cover is deciduous forest, agriculture, and dewatering unit. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, water use facilities will be limited to in size and nature due to the proximity of the dewatering unit.

Table 4-269. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	153
Stream Mile and Bank	TRM 100.5L
Land Use/Land Cover	Deciduous forest and agricultural
Fronts Former TVA Tract (s)	XGIR–455 and XGIR–463
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for wildlife management

Parcel 270 – (25.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the right descending bank of Cypress Creek at TRM 100L. The parcel extends among TVA markers 150–49 to 150–43 and TVA markers 150–42 to 150–41. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. It is traversed by a Railroad and adjoins Camden Dewatering Unit. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, water use facilities will be limited in size and nature due to the proximity of the dewatering unit, and consultation with TWRA may be required. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific programmatic and environmental review.

Table 4-270. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	150 and 153
Stream Mile and Bank	TRM 100L
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	XGIR–452
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency

Parcel 271 – (87.8 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is comprised of five noncontiguous tracts of land along Cypress Creek. The parcel in its entirety consists of deciduous forest. A railroad is also located adjacent to the parcel. There is a moderate probability for cultural resources to be present within this parcel, and only a portion of the area has been surveyed. A site-specific environmental review will be conducted prior to any ground disturbance. Requests for use of TVA lands and associated water–based structures to support industrial purposes would be considered.

Table 4-271. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	150 and 152
Stream Mile and Bank	TRM 100L
Land Use/Land Cover	Deciduous forest
Current Agreements/Commitments	Revocable license to the Benton Electric System for electric utilities

Parcel 272 – (32.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the right descending bank of Cypress Creek. The parcel extends among TVA markers 152–39 to 150–59 and TVA markers 152–38 to 150–58. This parcel lies entirely below the 375-foot msl, and the current land cover deciduous forest. An existing railroad is fronting the parcel. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-272. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	152
Stream Mile and Bank	TRM 100L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–449 and XGIR–450
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None

Parcel 273 – (448.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

The majority of this large parcel is located along both banks of Cypress Creek. This parcel features multi–age deciduous forests with high quality and diverse forested, scrub-shrub, and emergent wetlands. In the 1990s, bottomland hardwood tree species were planted on portions of this parcel. Access is available by boat to portions of this parcel with potential access from back lying private property; therefore, public access is somewhat limited. The parcel provides beneficial habitat for several game animals, as well as a diversity of wetland wildlife species. This parcel contains a revocable license to the City of Camden for a floodway. This area receives substantial use for hunting, fishing, and wildlife observation. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-273. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE and 21–NE
TVA D–Stage Map Numbers	150 and 152
Stream Mile and Bank	TRM 100L
Land Use/Land Cover	Deciduous forest and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, wildlife observation, and fishing
Current Agreements/Commitments	Revocable license to the City of Camden, Tennessee, for a floodway
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetland habitat enhancements and monitoring of previous bottomland hardwood tree plantings • Monitor dispersed recreation uses and impacts • Promote wildlife observation opportunities
Potential Partners	• Tennessee Wildlife Resources Agency • U.S. Fish and Wildlife Service • Ducks Unlimited

Parcel 274 – (9.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Benton County, Tennessee, and contains a portion of TSR 191. Requests for private water use facilities would not be considered.

Table 4-274. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	152
Stream Mile and Bank	TRM 100L
Land Use/Land Cover	Deciduous forest and road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Benton County, Tennessee for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 275 – (2.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Cypress Creek and extends between TVA markers 151–47 to 151–48. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered.

Table 4-275. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	152
Stream Mile and Bank	TRM 100L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–442
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None

Parcel 276 – (119.8 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This large parcel is located along the left descending bank of Cypress Creek at Reeves Branch. This parcel features multi–age deciduous forests with some forested, scrub-shrub, and emergent wetlands. This area serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Access to the parcel is available by boat only; therefore, public use is limited. The parcel provides beneficial habitat for several game animals, as well as a diversity of wetland wildlife species. This area receives some use for hunting, fishing, and wildlife observation. No federally or state-listed species are known to occur on this parcel. There is a high probability for the presence of cultural resources, but only a portion of the area has been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-276. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	150 and 152
Stream Mile and Bank	TRM 100L
Land Use/Land Cover	Deciduous forest and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, fishing, and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Monitor dispersed recreation uses and impacts • Manage in concert with Cultural Resource protection needs
Potential Partners	None identified

Parcel 277 – (84.1 acres)

Proposed RLMP Allocation: Zone7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River incorporating portions of shoreline along Cypress and Beaver Dam creeks. The parcel extends between TVA markers 150-71 and 142-94. This parcel lies entirely below the 375-foot msl, and the current

land use is deciduous forest and maintained lawns. Hallshire Estates, Merry Oaks, Holiday Hills, Davis Properties, French Riviera, Northlake, and TVA–developed Beaver Dam subdivisions are located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-277. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	142 and 150
Stream Mile and Bank	TRM 99L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–10, XGIR–432, XGIR–433, XGIR–434, XGIR–435, XGIR–436, XGIR–437, and XGIR–438
Structure Profile	Varies
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 278 – (18.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of several forested islands and shallow water areas located at the confluence of Cypress Creek and the Tennessee River. This parcel features bottomland hardwoods on the islands with some forested, scrub-shrub, and emergent wetlands. Access to the parcel is available by boat only; therefore, public use is limited. The parcel provides beneficial habitat for waterfowl, as well as a diversity of wetland wildlife species. This area receives substantial use for waterfowl hunting and fishing. There are numerous temporary duck blinds located in the area because of the proximity to the Camden Dewatering Unit and WMA. No federally listed as endangered, threatened or special status species are known to occur on the parcel. However, the alligator snapping turtle (*Macrochelys temminckii*), state-listed as in need of management, has been previously identified on one of the islands. There is a high probability for the presence of cultural resources, but only a portion of the area has been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-278. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	150
Stream Mile and Bank	TRMs 99–100L
Land Use/Land Cover	Bottomland hardwoods and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, fishing, wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Assess duck blinds for TVA Policy adherence • Survey islands for nesting wading/water bird use • Assess islands for shoreline stabilization needs
Potential Partners	None identified

Parcel 279 – (2.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Beaverdam Creek. The backlying property is former TVA property (Tract No. XTGIR-13) and was transferred to the State of Tennessee for public recreation. TWRA maintains a boat ramp and parking area on this parcel. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-279. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	142
Stream Mile and Bank	TRM 98.7L

Parcel 280 – (214.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel consists of two distinct tracts of land located along the upper end of Beaverdam Creek and south of Cedar Hollow. This parcel features upland and bottomland hardwoods and forested, scrub-shrub, and emergent wetlands along the shoreline fringe. In addition, this parcel serves as a visual buffer from nearby shoreline development in addition to

providing numerous riparian habitat functions. Access is available by boat and a public road that intersects this parcel. This area does receive public use by hunters for small and large game species. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but only a portion of the area has been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-280. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	142
Stream Mile and Bank	TRM 98.7L
Land Use/Land Cover	Bottomland and upland hardwoods and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Refresh the existing paint denoting TVA's property boundaries • Wetlands protection and management • Conduct additional cultural resource surveys
Potential Partners	None identified

Parcel 281 – (5.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land located in Benton County, Tennessee, and contains a portion of TSR 191. Requests for private water use facilities would not be considered.

Table 4-281. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	142
Stream Mile and Bank	Beaver Dam Creek Mile 2.5B
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	Permanent easement to Benton County, Tennessee for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 282 – (7.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Beaver Dam Creek. The parcel extends between TVA markers 142–88 to 142–89. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-282. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	142
Stream Mile and Bank	TRM 98.7L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–708
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None

Parcel 283 – (8.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of Beaverdam Creek. This parcel features deciduous trees and forested wetlands and is surrounded by TVA lands allocated for Shoreline Access. In addition, this parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Access to the parcel is available by boat. Public use is limited by the small parcel size and proximity to development. The parcel provides some wildlife habitat. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing

shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-283. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	142
Stream Mile and Bank	TRM 98.7L
Land Use/Land Cover	Deciduous Forest and forested and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Refresh the existing paint denoting TVA's property boundaries
Potential Partners	None identified

Parcel 284 – (23.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three noncontiguous tracts and is located along the left descending bank of Beaver Dam Creek. This parcel lies entirely below the 375-foot msl, and the current land use is maintained lawns. Beaver Dam Lodge Cabin Sites, Camelot Subdivision and Williams Subdivision are located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-284. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	142
Stream Mile and Bank	TRM 98.7L
Land Use/Land Cover	Maintained lawns
Fronts Former TVA Tract (s)	XGIR–427, XGIR–428, and XGIR–429
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 285 – (0.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Beaver Dam Creek. The backlying property is former TVA property (Tract No. XTGIR-14) and was transferred to the State of Tennessee for public recreation. TWRA maintains a boat ramp and parking lot on this parcel. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-285. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	142
Stream Mile and Bank	TRM 98.7L

Parcel 286 – (2.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located off Lodge Road and along Beaver Dam Creek. The area is under a revocable license to Beaver Dam Resort for commercial recreation. Resort facilities include a marina, boat ramp, picnic pavilion, campground, and restaurant. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-286. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	142
Stream Mile and Bank	TRM 98.7L

Parcel 287 – (24.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of Beaverdam Creek. This parcel features deciduous trees and forested wetlands and is surrounded by TVA lands allocated for Shoreline Access. In addition, this parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Access to the parcel is available by boat. Public use is limited by the small parcel size and proximity to development. The parcel provides some wildlife habitat. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-287. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	142
Stream Mile and Bank	TRM 98.7L
Land Use/Land Cover	Deciduous Forest and forested and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Refresh the existing paint denoting TVA's property boundaries
Potential Partners	None identified

Parcel 288 – (85.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the left descending bank of TRM 98. The two tracts extend among TVA marker 142–81 to Parcel 279 and Parcel 279 to Parcel 290. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Schular Acres, Lakeview, Eva Harbor, and TVA–developed Eva subdivisions are located on the backlying private property. It is traversed by Arnold Branch Road at Arnold Branch. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-288. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE
TVA D–Stage Map Numbers	142 and 143
Stream Mile and Bank	TRM 98L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–423, XGIR–424, XGIR–425, XGIR–426, XGIR–606, and XGIR–784
Structure Profile	Varies
Current Agreements/Commitments	• Approvals for private water use facilities • Easement to Benton County for road/highway

Parcel 289 – (17.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of remnants of old railroad beds stretching from Beaver Dam Creek to TRM 96.6. This parcel features forested, scrub-shrub, and emergent wetlands. In addition, this parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions along the old railroad bed.

Road access is available at the upstream end of the old railroad bed with boat access only to the island portions of the parcel. This area does receive public use by waterfowl hunters. Historical uses of some of the islands include old railroad beds and utilization by nesting wading

birds including little blue herons in the 1980's. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-289. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–SE and 30–SW
TVA D–Stage Map Numbers	141,143, and 150
Stream Mile and Bank	TRMs 96.6–98.5L
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Waterfowl hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetland Protection and Management • Survey islands for nesting wading/water bird use • Conduct dispersed recreation inventory
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 290 – (48.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located near the Eva community. Recreation easement Tract No. XTGIR-131RE granted to the State of Tennessee covers the southern part of the parcel, and this area is managed as part of Nathan Bedford Forrest State Park. Facilities in this portion of the state park include a fishing pier, swimming beach, picnic area, and campground. On the northern portion of the parcel, the backlying property is former TVA property (Tract No. XTGIR-104) and was transferred to the State of Tennessee for public recreation. TWRA maintains a boat ramp and parking lot on this portion of the parcel. The undeveloped areas have a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-290. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	141 and 143
Stream Mile and Bank	TRM 98L

Parcel 291 – (0.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This extremely small parcel consists of two sets of low riparian zone islands located downstream of Johnsonville Fossil Plant. This parcel features forested, scrub-shrub, and emergent wetlands. Access to the parcel is by boat only; therefore, public use is limited. Islands may receive use by nesting wading/water birds and utilized by waterfowl hunters. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-291. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Humphreys, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	143A
Stream Mile and Bank	TRM 97.8R
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Waterfowl hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetland Protection and Management • Survey islands for nesting wading/water bird use • Conduct dispersed recreation inventory • Assess stabilization needs with respect to cultural resources protection
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 292 – (0.3 acre)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel consists of a submersed low riparian zone island located northwest of Johnsonville Fossil Plant. Access to the parcel is by boat only; therefore, public use is limited. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-292. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	141
Stream Mile and Bank	TRM 97.3L
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Waterfowl hunting
Current Agreements/Commitments	None identified
Potential Projects	Conduct cultural resources survey and assess for potential stabilization needs
Potential Partners	None identified

Parcel 293 – (4.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located south of Pilot Knob Road and features deciduous forested wetlands. In addition, this parcel serves as a visual buffer from nearby shoreline development while providing numerous riparian habitat functions. Access to the parcel is by public road and boat, but public use is limited. A small portion of this parcel is under a linear revocable license to support electric utilities and telephone service. No federally or state-listed species are known to occur on this parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-293. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	141
Stream Mile and Bank	TRM 97.3L
Land Use/Land Cover	Forested wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Revocable license to Southern Bell Telephone Company for telephone lines • Revocable license to Benton County, Tennessee Board of Public Utilities for electric utilities
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Refresh the existing paint denoting TVA's property boundaries
Potential Partners	None identified

Parcel 294 – (4.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is currently undeveloped. However, it is suitable for potential public or commercial recreation development. There is a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-294. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	141
Stream Mile and Bank	TRM 97.5L

Parcel 295 – (79.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of TRM 96.5. The parcel extends between TVA markers 141–21A to 141–37. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and a few maintained lawns. It is traversed by County Road 191. Water use facilities have been constructed along a portion of the shoreline, and

future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-295. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–SW
TVA D–Stage Map Numbers	141
Stream Mile and Bank	TRM 96.5L
Land Use/Land Cover	Deciduous forest, maintained lawns, and historic hardwood tree plantings
Fronts Former TVA Tract (s)	XGIR–8, XGIR–615, XGIR–420, XGIR–421, and XGIR–422
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to Benton County Board of Public Utilities for electric utilities • Revocable license to Southern Bell Telephone Company for telephone lines • Permanent easement to Benton County, Tennessee for a road/highway

Parcel 296 – (70.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located adjacent to former TVA property (Tract No. XTGIR-111) that was transferred to the State of Tennessee for the establishment of Nathan Bedford Forest State Park. Facilities within this portion of the park include rental cabins, campground, boat ramp, museum and trails. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-296. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	138 and 141
Stream Mile and Bank	TRM 96L

Parcel 297 – (97.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of TRM 93. The parcel extends between TVA markers 137–43 to 136–30. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. One water use facility has been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-297. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW and 30–SW
TVA D–Stage Map Numbers	137 and 138
Stream Mile and Bank	TRM 93L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	A portion of XGIR–412, XGIR–413, XGIR–414, XGIR–415, XGIR–416, XGIR–417, XGIR–418, and XGIR–419
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approved water use facility

Parcel 298 – (331.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of a large land tract and small islands located at the entrance of Harmon Creek. This parcel, known as the TWRA Harmon Creek WMA, features agricultural lands managed for wildlife benefits; upland and bottomland forests; and high quality forested, scrub-shrub, and emergent wetlands. Access to the Harmon Creek WMA is by public road and by boat. There is an informal boat ramp located on the parcel. The parcel receives substantial use by the public for hunting, fishing, and wildlife observation opportunities following WMA rules and regulations. There is a term license for agriculture share cropping as part of the Harmon Creek WMA programs. No federally or state-listed species are known to occur on the parcel. There is a historical record for a bald eagle nest on private property west of this parcel. There is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-298. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	132, 136, and 137
Stream Mile and Bank	TRM 88L
Land Use/Land Cover	Forested wetlands, scrub-shrub and emergent wetlands, upland and bottomland forests, and agricultural fields managed for wildlife benefits
Known Dispersed Recreation Opportunities	Small and big game hunting, fishing, waterfowl hunting, and wildlife observation
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Refresh the existing paint denoting TVA's property boundaries • Monitor dispersed recreation uses and impacts • Wetlands protection and enhancement • Expand wildlife observation opportunities
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 299 – (122.4 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel consists of several islands located between TRMs 80.8 and 90.1. Portions of the islands, within the TWRA Harmon Creek WMA, are under sharecropping agricultural agreements for wildlife management purposes; and other islands are forested wetlands with no agricultural use. This parcel features high quality forested, scrub-shrub, and emergent wetlands. Access to this parcel is by boat only; therefore, public use is somewhat limited. This area receives substantial use for hunting, fishing, and wildlife observation. All dispersed recreation on the parcel must comply with Harmon Creek WMA rules and regulations. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-299. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	132, 136, and 137
Stream Mile and Bank	TRMs 80.8 and 90.1B
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, fishing, wildlife observation
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Refresh the existing paint denoting TVA's property boundaries • Monitor dispersed recreation uses and impacts • Wetlands protection and enhancement • Expand wildlife observation opportunities • Assess islands for nesting wading/water birds
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 300 – (12.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Harmon Creek. The parcel extends between TVA markers 136–60 to 136–69. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. One water use facilities has been constructed along the shoreline, and future requests for private water use facilities would be considered. A bald eagle nesting record occurs within 660 feet of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-300. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	136
Stream Mile and Bank	TRM 88.5L
Land Use/Land Cover	Deciduous forest and maintained lawn
Fronts Former TVA Tract (s)	XGIR–409 and XGIR–410
Structure Profile	Elevation 381–foot mean sea level

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Revocable license to Benton County, Tennessee, Board of Public Utilities for electric utilities • Permanent easement to Benton County, Tennessee, for road/highway

Parcel 301 – (2,617.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is a large tract of land located along the left descending bank of the Tennessee River extending between river miles 85.5 and 88.5. TVA's Harmon Creek management unit is found on this parcel. This parcel features upland and bottomland hardwood forests; mixed pine; planted loblolly pine; approximately 350 acres of native warm season grasses, legumes, and native wildflowers; and high quality forested, scrub-shrub, and fringe emergent wetlands. Access to the parcel is by improved forest roads and by boat. This area receives substantial use by the public for hunting, bank fishing, wildlife observation, camping, and other day use activities. In addition to the agreements listed in the table below, a section of the parcel, south of Sulphur Creek, was used in the 1980's for U.S. Army field exercises. No federally or state-listed species are known to occur on the parcel. However, there are two bald eagle nesting records on the parcel, one of which is active. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-301. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	129
Stream Mile and Bank	TRMs 85.5–88.5L
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands; upland and bottomland forests; native warm season grass/legume fields; wildflowers; and mixed pine and loblolly pine plantations
Known Dispersed Recreation Opportunities	Hunting, bank fishing, wildlife observation, camping, and picnicking

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Revocable license to Benton County, Tennessee, Board of Public Utilities for electric utilities • Revocable license for landscaping to private individual
Potential Projects	• Refresh the existing paint and signage denoting TVA's property boundaries • Monitor dispersed recreation uses and impacts • Wetlands protection and enhancement • Continued implementation of Harmon Creek Unit Plan goals and objectives, which includes several forest management actions to improve wildlife habitat
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 302 – (31.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Harmon Creek. The eastern portion of the parcel is under a revocable license to TWRA for public recreation and a boat ramp and parking lot are maintained. The western section of the parcel is under a revocable license to Harmon Creek Resort for commercial recreation. This commercial recreation area includes a campground, boat ramp, parking lot, and a shop selling bait and tackle. This parcel has a moderate probability for the presence of cultural resources in undeveloped area, but has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-302. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	132 and 136
Stream Mile and Bank	TRM 88.5L

Parcel 303 – (64.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of TRM 84.5. The parcel extends between TVA markers 127–27 to 131–52. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have been constructed along a portion of the

right descending bank of Little Crooked Creek, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-303. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	127 and 131
Stream Mile and Bank	TRM 84.5L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–406, XGIR–407, and XGIR–408
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to Benton County, Tennessee, Board of Public Utilities for electric utilities

---

Parcel 304 – (10.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located on both banks of Little Crooked Creek, a tributary to the Tennessee River. This parcel features deciduous forest, and high quality forested, scrub-shrub, and fringe emergent wetlands. Access to the parcel is by boat and via Point Mason and Smith roads. This area is used for bank fishing and access to Kentucky Reservoir. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-304. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D-Stage Map Numbers	127
Stream Mile and Bank	TRM 83.6L
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands, and deciduous forest

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Refresh the existing paint denoting TVA's property boundaries • Monitor dispersed recreation uses and impacts • Wetlands protection and enhancement • Cultural Resources survey
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 305 – (21.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is under two revocable licenses to the State of Tennessee for recreation access. The backlying property is former TVA property (Tract No. XTGIR-12) that was transferred to the State of Tennessee for public recreation. TWRA maintains a boat ramp and parking lot on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-305. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	127
Stream Mile and Bank	TRM 83.8L

Parcel 306 – (26.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of TRM 83. The parcel extends between TVA markers 126–51 to 127–26. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-306. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	126 and 127
Stream Mile and Bank	TRM 83L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	A portion of XGIR–404 and XGIR–405
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 307 – (0.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel consists of an island located near the confluence of Raft Hollow Creek and the Tennessee River. This parcel is mainly inundated with water and features scrub-shrub, emergent wetlands, and aquatic beds with vascular rooted plants. Access to the parcel is by boat only and most of the island has eroded away; therefore, public use is limited. This area is used for fishing from a boat. No federally or state-listed species are known to occur on the parcel. There is an extant record for a federally listed mussel located approximately 0.5–mile downstream. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-307. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	127
Stream Mile and Bank	TRM 82.6L
Land Use/Land Cover	Scrub-shrub and emergent wetlands, and aquatic beds with rooted vascular plants
Known Dispersed Recreation Opportunities	Boat fishing
Current Agreements/Commitments	None identified
Potential Projects	Cultural resources survey
Potential Partners	None identified

Parcel 308 – (7.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is a designated safety harbor for commercial barges and recreational boats during adverse weather conditions or equipment malfunction. There is a low probability for the presence of cultural resources, but the area has not been surveyed. Future development of this tract will be restricted and requests for private water use facilities would not be considered.

Table 4-308. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	30–NW
TVA D–Stage Map Numbers	126D
Stream Mile and Bank	TRM 82.4L
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 309 – (25.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of TRM 82. The parcel extends between TVA markers 126–42 to 126–48. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. A bald eagle nesting record exists within 660 feet of this parcel. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-309. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW and 30–NW
TVA D–Stage Map Numbers	126
Stream Mile and Bank	TRM 82L

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–403 and a portion of XGIR–404
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None

Parcel 310 – (8.9 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel consists of several forested islands that begin north of Raft Hollow Creek and extend to Bass Bay. This parcel features upland and bottomland forested areas; high quality forested, scrub-shrub, emergent wetlands; and aquatic beds with rooted vascular plants. Access to the parcel is by boat only; therefore, public use is limited. These islands receive some use by waterfowl hunters. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-310. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	121 and 126
Stream Mile and Bank	TRMs 79.8–81.8L
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands and aquatic beds with rooted vascular plants
Known Dispersed Recreation Opportunities	Waterfowl hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetlands protection and enhancement • Survey area for nesting wading/water bird use • Determine level of impacts on island vegetation from nesting double–crested cormorants
Potential Partners	• U.S. Department of Agriculture Wildlife Services • U.S. Fish and Wildlife Services • Tennessee Wildlife Resources Agency

Parcel 311 – (480.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel occupies the upper end of Bass Bay and follows the shoreline south extending toward Raft Hollow Creek. This parcel features upland and bottomland forested areas and high quality forested, scrub-shrub, and emergent wetlands. Access to the parcel is by boat and by public road to Wynn Cemetery. This parcel receives use by small and large game hunters as well as by waterfowl hunters. This area is also used for wildlife observation. Historically, embankment plantings were established on portions of this parcel to protect relocated roadway embankments from erosion. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-311. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	121 and 126
Stream Mile and Bank	TRMs 80.1–81.8L
Land Use/Land Cover	Upland deciduous hardwoods, historic hardwood tree plantings, and forested, scrub-shrub and emergent wetlands
Known Dispersed Recreation Opportunities	Waterfowl hunting, hunting, and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetlands protection and enhancement • Dispersed recreation inventory
Potential Partners	None identified

Parcel 312 – (3.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land located along the left descending bank of Crooked Creek. The parcel extends among TVA markers 121–40 to 121–38 and TVA markers 126–40 to 126–52. This parcel lies entirely below the 375-foot msl, and the current land

cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-312. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	121 and 126
Stream Mile and Bank	TRM 81.8L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–401
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None

Parcel 313 – (69.9 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel occupies the northern side of Bass Bay and surrounds Crooked Creek Cemetery. This parcel is known as Crooked Creek Cemetery HPA. The area has the natural area designation due to a stand of large hardwoods, predominately white oaks, which are greater than 110 years old and surround the Crooked Creek Cemetery. The landscape features a saw back ridge and a glade–like ravine with several wet seeps. Due to several tornados, several of the white oaks have been blown down; however, but this area could be used as a future restoration project. In addition, a biological inventory could be completed to identify any sensitive species present in the glade like ravine or seeps.

Access to the parcel is by boat and by public road, and an easement exists for the cemetery. Some informal camping occurs along the shoreline. Historical use of the parcel includes a railroad through the western edge of the parcel. The railroad is no longer used, and the track has been removed. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-313. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	121
Stream Mile and Bank	TRMs 80–80.4L
Land Use/Land Cover	Deciduous upland forest
Known Dispersed Recreation Opportunities	Wildlife and scenic observation and informal camping along shoreline
Current Agreements/Commitments	Easement for Crooked Creek Cemetery
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Restoration project potential pending funds and partners • Complete a biological inventory • Implement natural areas management plan
Potential Partners	None identified

Parcel 314 – (42.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of two distinct tracts of land along the left descending bank of Crooked Creek. This parcel features bottomland forested areas and high quality forested, scrub-shrub, and fringe emergent wetlands. Access is by boat and a public road that bisects a portion of this parcel. This parcel receives use by small and large game hunters as well as by waterfowl hunters. This area is also used for wildlife observation. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-314. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	121
Stream Mile and Bank	TRMs 79.5–80L
Land Use/Land Cover	Upland and bottomland hardwoods and forested, scrub-shrub, and emergent wetlands

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Waterfowl hunting, hunting for small and large game, and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetlands protection and enhancement
Potential Partners	None identified

Parcel 315 – (11.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Crooked Creek and is under a revocable license to Randy's Camp Resort for commercial recreation. However, there are no water–based facilities currently present. There is a moderate probability for the presence of cultural resources, but only a portion of the area has been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-315. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	121
Stream Mile and Bank	TRM 79.5L

Parcel 316 – (9.4 acres)

Proposed RLMP Allocation: Zone7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the left descending bank of TRM 79. The two tracts extend among TVA markers 121–55 to 121–51 and 121–43 to 121–44. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-316. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	121
Stream Mile and Bank	TRM 79L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	A portion of XGIR–396 and XGIR–399
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to Benton County, Tennessee, Board of Public Utilities for electric utilities

Parcel 317 – (15.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Crooked Creek and is under a revocable license to Bass Bay Village and Marina for commercial recreation. Amenities available on this parcel include a boat ramp, marina, and cabins. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-317. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	121
Stream Mile and Bank	TRM 79.5L

Parcel 318 – (185.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of a three tracts of land: a large tract of land, a small tract of land and an island. This parcel features upland hardwoods, with some pine stands on ridge tops, and forested, scrub-shrub, and fringe emergent wetlands along shoreline areas. Access is by boat and a public road located along the southern portion of the parcel. This parcel receives use for small and large game hunting and wildlife observation. No federally or state-listed species are known to occur on this parcel. There is a moderate probability for the presence of cultural

resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-318. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	121
Stream Mile and Bank	TRMs 79–79.9L
Land Use/Land Cover	Upland hardwoods, pine stands, and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Small and large game hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Vegetation harvests to enhance wildlife habitat • Dispersed recreation inventory on small island and main parcel
Potential Partners	None identified

Parcel 319 – (11.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

A portion of this parcel is under a revocable license to the State of Tennessee for recreation access. The backlying property is former TVA property (Tract No. XTGIR-11) that was transferred to the State of Tennessee for public recreation. TWRA maintains a boat ramp and parking area on the parcel that can be access via Danville Road. The undeveloped portion has a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-319. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	118
Stream Mile and Bank	TRM 78.1L

Parcel 320 – (10.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of TRM 78.1. The parcel extends between TVA markers 118–37 to 118–39. This parcel lies entirely below the 375-foot msl, and the current land use deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-320. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	118
Stream Mile and Bank	TRM 78.1L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–395
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 321 – (2.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the left descending bank of the Tennessee River and north of French Hollow. This parcel features upland and bottomland hardwoods and forested, scrub-shrub, and fringe emergent wetlands. Access to the parcel is by boat and a nearby public road. Due to the small size and nearby residential development, public use is limited. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. No federally or state-listed species are known to occur on this parcel. There is a low probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-321. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	118
Stream Mile and Bank	TRM 78.1L
Land Use/Land Cover	Upland and bottomland hardwoods and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 322 – (11.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of TRM 78. The parcel extends between TVA markers 118–10 to 118–36. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Stump Water Camp Subdivision is located on a portion of the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-322. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	118
Stream Mile and Bank	TRM 78L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–393 and XGIR–394
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 323 – (25.5 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel is located along the left descending bank of the Tennessee River near Garner Hollow. This parcel features upland and bottomland forested areas, with two planted loblolly pine stands, and high quality forested, scrub-shrub, and emergent wetlands. Access to the parcel is by boat only; therefore, public use is limited. Small and large game hunting occurs over portions of the parcel, and waterfowl hunting occurs along the shoreline wetland areas. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-323. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	118
Stream Mile and Bank	TRM 77.8L
Land Use/Land Cover	planted loblolly pine stands and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Waterfowl, small, and large game hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetlands protection and enhancement • Timber cruise and habitat assessment for future management of planted loblolly pine stands • Conduct thin or regeneration harvests in planted loblolly stands • Manage pine stands for Indiana bat habitat • Detailed cultural resource assessments
Potential Partners	None known

Parcel 324 – (12.5 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel consists of a low–forested island located south of Lick Creek and north of the old Danville Bridge. This parcel features bottomland forested areas and high quality forested, scrub-shrub, fringe emergent wetlands that serve as riparian habitats. Access to the parcel is by boat only; therefore, public use is limited. This island receives some use by waterfowl hunters and for wildlife observation. The island vegetation has degraded from high-density double–crested cormorant nesting activities and use by other nesting wading birds. No federally or state-listed as endangered, threatened, or special status species are known to occur on this parcel. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-324. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	118
Stream Mile and Bank	TRMs 77–77.3L
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands, and bottomland forest
Known Dispersed Recreation Opportunities	Waterfowl hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetland Protection • Survey for nesting wading/water bird use • Determine level of impacts on island vegetation from nesting double–crested cormorants • Detailed cultural resource survey
Potential Partners	• U.S. Department of Agriculture Wildlife Services • U.S. Fish and Wildlife Service • Tennessee Wildlife Resources Agency

Parcel 325 – (60.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Lick Creek and left descending bank of TRM 76. The parcel extends between TVA markers 117–96 to 118–15. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Snow's Lick Creek Subdivision is located on a portion of the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-325. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE and 29–SW
TVA D–Stage Map Numbers	116, 117, and 118
Stream Mile and Bank	TRM 76L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–389, XGIR–390, XGIR–391, and XGIR–392
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to Benton County, Tennessee, Board of Public Utilities for electric utilities

Parcel 326 – (23.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Lick Creek, and a portion of the parcel is under a permanent easement to the State of Tennessee for recreation access. The backlying property is former TVA property (Tract No. XTGIR-10) that was transferred to the State of Tennessee for public recreation. TWRA maintains a boat ramp and parking area on the parcel. The undeveloped areas have a moderate to high probability for the presence of cultural resources.

Table 4-326. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	117
Stream Mile and Bank	TRM 75L

Parcel 327 – (23.2 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel consists of two islands and two tracts of land located along both banks of Lick Creek. The TWRA Lick Creek WMA is located in this area. This parcel features upland and bottomland forested areas; mixed pine stands; and high quality forested, scrub-shrub, fringe emergent wetlands. Access to the parcel is by boat and two public roads located along the west and northwest portion of the parcel. Some public use of this parcel, specifically waterfowl hunting, is regulated with the WMA's rules and regulations. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources. Historically, there have been facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new water use facilities would not be considered.

Table 4-327. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	117
Stream Mile and Bank	TRM 75.4L
Land Use/Land Cover	Historic hardwood tree plantings; forested, scrub-shrub, and emergent wetlands; and upland and bottomland forest
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	• Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area • Revocable license to Benton County, Tennessee Board of Public Utilities for electric utilities
Potential Projects	• Refresh the existing paint denoting TVA's property • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 328 – (16.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Lick Creek. The parcel extends between TVA markers 117–94 to 117–95. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific programmatic and environmental review.

Table 4-328. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	117
Stream Mile and Bank	TRM 75.4L
Land Use/Land Cover	Deciduous forest and historic hardwood tree plantings
Fronts Former TVA Tract (s)	XGIR–388
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area

Parcel 329 – (48.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the upper end of the Lick Creek embayment and is considered part of the TWRA Lick Creek WMA. This parcel features a mixture of bottomland–forested, agricultural lands, and wetlands. This parcel receives substantial hunting and wildlife observation. Access to the parcel is by boat and Chapel Hill Road. Some public use of this parcel, specifically waterfowl hunting, is regulated with the WMA's rules and regulations. No federally or state-listed species are known to occur on this parcel. There is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-329. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	117
Stream Mile and Bank	TRM 75.4L
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands; bottomland forest; and agricultural fields
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetland–bottomland hardwood management to create habitat diversity
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 330 – (52.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three noncontiguous tracts of land along both descending banks of Lick Creek. The three tracts extend among TVA markers 117–81 to 117–86; 117–87 to 117–90; and 117–92 to 117–93. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific programmatic and environmental review.

Table 4-330. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	117
Stream Mile and Bank	TRM 75.4L
Land Use/Land Cover	Deciduous forest, maintained lawns, and historic hardwood tree plantings
Fronts Former TVA Tract (s)	XGIR–381, XGIR–382, XGIR–383, XGIR–384, XGIR–385, XGIR–386, and XGIR–387
Structure Profile	Elevation 381–foot mean sea level

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area • Revocable license to Benton County, Tennessee, Board of Public Utilities for electric utilities • Revocable license to Southern Bell Telephone for telephone lines

Parcel 331 – (4.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Lick Creek, and a portion of the parcel is under a permanent easement to the State of Tennessee for recreation access. The backlying property is former TVA property (Tract No. XTGIR-9) that was transferred to the State of Tennessee for public recreation. TWRA maintains a boat ramp and parking area on the parcel. There is a high probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-331. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	117
Stream Mile and Bank	TRM 75.3L

Parcel 332 – (203.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of Lick Creek and is adjacent to the TWRA Lick Creek WMA. This parcel features upland hardwoods, interspersed loblolly pine plantations, fringe emergent wetlands, and former open lands. Access to the parcel is by boat and some limited public road access. Large, small game, and waterfowl hunting and wildlife observation occur on the parcel. Some public use of this parcel, specifically waterfowl hunting, is regulated with the WMA's rules and regulations. No federally or state-listed as listed endangered, threatened or special status species are known to occur on the parcel. There is a moderate

probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-332. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	115 and 117
Stream Mile and Bank	TRMs 75.2–75.5L
Land Use/Land Cover	Fringe emergent wetland, upland hardwoods, loblolly pine plantations, and open land managed for wildlife
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Manage planted pine stands for habitat diversity and/or Indiana Bat habitat
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 333 – (40.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land located along the left descending bank of TRM 75. The parcel extends among TVA markers 115–46 to 115–47 and 115–11A to Parcel 332. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-333. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE and 29–SW
TVA D–Stage Map Numbers	115
Stream Mile and Bank	TRM 75L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–378 and XGIR–379

Location Component and Public Involvement Opportunities	Parcel Specific Information
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 334 – (3.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the left descending bank of Lick Creek and adjacent to residential development. This parcel features bottomland forest with some fringe emergent wetlands that serve as riparian habitats along the shoreline. Access to the parcel is by boat and Hickory Hollow Cove Road. This parcel is small and receives limited public use. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. No federally listed as endangered, threatened or special status species are known to occur on the parcel. There is a low probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-334. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	115
Stream Mile and Bank	TRM 75.1L
Land Use/Land Cover	Fringe emergent wetlands and bottomland forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 335 – (1.7 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel consists of several islands located between TRMs 74 and 75. This parcel features bottomland forested areas and high quality, forested, scrub-shrub, and fringe emergent

wetlands. This parcel receives substantial use by waterfowl hunters, and there are several temporary waterfowl hunting blinds in the vicinity. High–density double–crested cormorant and colonial wading bird nesting activities occur on the islands. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-335. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	29–SW
TVA D–Stage Map Numbers	115 and 116
Stream Mile and Bank	TRMs 74.1–75.6L
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands and bottomland forest
Known Dispersed Recreation Opportunities	Waterfowl hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetland protection and enhancement • Survey for nesting wading/water bird use • Determine level of impacts on island vegetation from nesting double–crested cormorants • Detailed cultural resource survey • Stabilization needs for cultural resource protection
Potential Partners	• Tennessee Wildlife Resources Agency • U.S. Department of Agriculture Wildlife Services • U.S. Fish and Wildlife Service

Parcel 336 – (3.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of the Tennessee River at the confluence of Granny's Branch. This area includes Adventure Bay Resort and Marina. However, the facilities have sustained damage from adverse weather conditions and are currently not in operation. There is a moderate probability for the presence of cultural resources on the parcel.

Table 4-336. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	115
Stream Mile and Bank	TRM 74L

Parcel 337 – (58.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of TRM 74. The parcel extends between TVA markers 115–46 to Parcel 336. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-337. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry and Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE and 29SW
TVA D–Stage Map Numbers	115
Stream Mile and Bank	TRM 74L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–374, XGIR–375, XGIR–376, and XGIR–377
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Benton County, Tennessee Board of Public Utilities for electric utilities • Permanent easements (XGIR–374, S.1x; XGIR–375, S.1x; XGIR–376, S.1x; and XGIR–377, S.1x)

Parcel 338 – (8.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Big Sandy River, and a portion of the parcel is under a permanent easement to the State of Tennessee for recreation access. The backlying property is former TVA property (Tract No. XTGIR-99) that was transferred to the State of Tennessee for public recreation. TWRA maintains a boat launching ramp and parking

area on this parcel. The undeveloped areas have a high probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-338. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	96
Stream Mile and Bank	Big Sandy River Mile 11R

Parcel 339 – (113.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This moderate size parcel is located along the right descending bank of Big Sandy River and considered part of the TWRA New Hope WMA. The parcel features a mixture of bottomland hardwoods, scattered loblolly pines, open agricultural lands, and wetlands. Access to the parcel is by boat and public road. Small and big game and waterfowl hunting are featured uses of the parcel. Some public use of this parcel, specifically waterfowl hunting, is regulated with the WMA's rules and regulations. This area also receives substantial use for wildlife observation opportunities. No federally or state-listed species are known to occur on the parcel. There is a historic bald eagle nest on parcel near mouth of Hurricane Creek. There is a moderate probability for the presence of cultural resources. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new water use facilities would not be considered.

Table 4-339. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	96 and 97
Stream Mile and Bank	Big Sandy River Miles 11–12R
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands, agricultural land, bottomland forest, and loblolly pines
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline A • Cultural Resources assessment • Enhance wildlife management benefits following State Wildlife Action Plan objectives • Monitor dispersed recreation uses and impacts
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 340 – (4.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of islands located between Big Sandy River Miles 12 and 15. This parcel features fringe emergent wetlands on the islands located upstream. Access to the parcel is by boat only; therefore, public use is limited. This parcel receives some use by waterfowl hunters during the winter months. The islands located near the Big Sandy Dewatering Unit are within the TWRA Big Sandy WMA. No federally or state-listed species are known to occur on the parcel. There is a low probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-340. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton and Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	97
Stream Mile and Bank	Big Sandy River Miles 12–15B
Land Use/Land Cover	Fringe emergent wetlands
Known Dispersed Recreation Opportunities	Waterfowl hunting
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area
Potential Projects	• Assess islands for re–establishment or stabilization • Re–establish islands to provide habitat for nesting wading birds
Potential Partners	• U.S. Fish and Wildlife Service • Tennessee Wildlife Resources Agency

Parcel 341 – (51.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Big Sandy River lying entirely below the 375-foot msl. The current land use varies with maintained lawns, wetlands located in some of the coves, and embankment plantings located along New Hope Road. Harbor Town Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-341. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	97
Stream Mile and Bank	Big Sandy River Mile 12.1–13R
Land Use/Land Cover	Maintained lawns, wetlands, and historic hardwood tree plantings
Fronts Former TVA Tract (s)	XGIR–663, XGIR–664, XGIR–665, and XGIR–666
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 342 – (20.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located adjacent to New Hope Road and residential development. The parcel now reflects the road ROW and maintained lawn. However, this small parcel was once included in a larger embankment planting effort. This parcel receives limited use due to the size and proximity to adjacent residential areas. A revocable license for electric utilities crosses the western edge of the parcel. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-342. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	97 and 105
Stream Mile and Bank	Big Sandy River Mile 13.6R
Land Use/Land Cover	Maintained lawn and historic hardwood tree plantings
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to Benton County, Tennessee for a roadway • Revocable license to Benton County, Tennessee, Board of Public Utilities for electric utilities • Revocable license to Southern Bell Telephone and Telegraph Company for telephone lines
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 343 – (14.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located adjacent to New Hope Road and residential development. The parcel features bottomland forests and high quality forested, scrub-shrub, and fringe emergent wetlands. Access to the parcel is by adjacent public roads and limited boat access. This parcel receives limited use due to the size and proximity to adjacent residential areas. However, it does serve as a visual buffer from nearby residential development in addition to providing numerous riparian habitat functions. Embankment plantings have been established on portions of these parcels for erosion control efforts for relocated roads. A revocable license for electric utilities crosses the eastern edge of the parcel. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-343. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	97 and 105
Stream Mile and Bank	Big Sandy River Mile 13.6R
Land Use/Land Cover	Historic hardwood tree plantings, bottomland forest, and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to Benton County, Tennessee for a roadway • Revocable license to Benton County, Tennessee, Board of Public Utilities for electric utilities • Revocable license to Southern Bell Telephone and Telegraph Company for telephone lines
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Embankment planting research
Potential Partners	Universities

Parcel 344 – (18.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Big Sandy River Mile 14 and extends between TVA markers 105–84 to 97–78. This parcel lies entirely below the 375-foot msl, and the current land use deciduous forest and maintained lawns. Harbor Town South Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-344. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	97and 105
Stream Mile and Bank	Big Sandy River Mile 14R
Land Use/Land Cover	Deciduous forest and maintained lawns

Location Component and Public Involvement Opportunities	Parcel Specific Information
Fronts Former TVA Tract (s)	XGIR–660, XGIR–661, and XGIR–662
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area

Parcel 345 – (99.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This moderate size parcel is located along Big Sandy River and in close proximity to Big Sandy Dewatering Unit. This parcel features upland and bottomland forests, scattered pines, and high quality forested, scrub-shrub, and fringe emergent wetlands. Access to the parcel is by boat and TSR 69. This parcel receives substantial use by hunters for small and big game and waterfowl hunting due to large parcel size and proximity to TWRA's Big Sandy WMA. There is a revocable license issued to a public utility and telephone company for electric and phone lines that crosses a portion of the parcel. No federally or state-listed species are known to occur on the parcel. However, one bald eagle nesting record occurs within 660 feet of this parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-345. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–NE
TVA D–Stage Map Numbers	105
Stream Mile and Bank	Big Sandy River Miles 14.4–14.8R
Land Use/Land Cover	Upland and bottomland forest and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	• Revocable license to Benton County, Tennessee Board of Public Utilities for electric utilities • Revocable license to Southern Bell Telephone for telephone lines • Permanent easement to the Town of Big Sandy, Tennessee, for roadways • Permanent easement to Tennessee Department of Transportation for roadways

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 346 – (11.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along a small drainage canal to Big Sandy River Mile 14.4 and lies adjacent to Water Street, Threets Lane, and Depot Street. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest and grassland. Water use facilities have not been constructed along the shoreline. Pursuant to the rights conveyed with the adjacent former TVA property (Tract No. XGIR-657), future requests for private water use facilities would be considered. However, there is an adjacent drainage canal that may impact the size and nature of water use facilities. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-346. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–NE
TVA D–Stage Map Numbers	105–2
Stream Mile and Bank	Big Sandy River Mile 14.4R
Land Use/Land Cover	Deciduous forest and grasslands
Fronts Former TVA Tract (s)	XGIR–657
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None identified

Parcel 347 – (36.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Big Sandy River and is managed by the Town of Big Sandy via a recreation easement (Tract No. XTGIR-62E). This municipal park includes picnic pavilions, trails, play fields, and restrooms. The undeveloped areas have a

moderate probability for the presence of cultural resources but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-347. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	105
Stream Mile and Bank	Big Sandy River Mile 15R

Parcel 348 – (3.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is under a permanent easement to the Town of Big Sandy for a wastewater treatment plant. The wastewater treatment plant and associated pond, access road and parking are located on the parcel. A baseball field has been constructed on a portion of this parcel and the neighboring TVA property. The neighboring parcel is under a term easement to the Town of Big Sandy for recreational purposes. There is a low probability for the presence of cultural resources, but the area has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-348. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–NE
TVA D–Stage Map Numbers	105 and 105–2
Stream Mile and Bank	Big Sandy River Mile 14.9R
Land Use/Land Cover	Wastewater treatment plant and recreation
Known Dispersed Recreation Opportunities	Baseball field
Current Agreements/Commitments	Permanent easement to the Town of Big Sandy for a wastewater treatment plant
Potential Projects	None identified
Potential Partners	None identified

Parcel 349 – (25.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small size parcel is located adjacent to the Big Sandy Dewatering Unit. The parcel features upland and bottomland forests and fringe emergent wetlands. Access is by public road; however, public use is limited due to the small parcel size. No federally or state-listed species are known to occur on this parcel. There is a low probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-349. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–NE
TVA D–Stage Map Numbers	105 and 105–2
Stream Mile and Bank	Big Sandy River Mile 15R
Land Use/Land Cover	Upland and bottomland forest and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Revocable license to Benton County, Tennessee Board of Public Utilities for electric utilities • Revocable license to Southern Bell Telephone for telephone lines
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 350 – (25.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small size parcel is located adjacent to the Big Sandy Dewatering Unit. The parcel features upland and bottomland forests and fringe emergent wetlands. Access is by public road; however, public use is limited due to the small parcel size. The outfall for the adjacent sewage pump station fronts this parcel. No federally or state-listed species are known to occur on this parcel. There is a low probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-350. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–NE
TVA D–Stage Map Numbers	105 and 105–2
Stream Mile and Bank	Big Sandy River Mile 15R
Land Use/Land Cover	Upland and bottomland forest and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Revocable license to Benton County, Tennessee Board of Public Utilities for electric utilities • Revocable license to Southern Bell Telephone for telephone lines
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 351 – (35.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for SR 69A. Requests for private water use facilities would not be considered.

Table 4-351. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–NE
TVA D–Stage Map Numbers	104, 105, and 105–2
Stream Mile and Bank	Big Sandy River Mile 15B
Land Use/Land Cover	Pump house and levee
Known Dispersed Recreation Opportunities	Hunting, photography, wildlife observation, and fishing
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 352 – (1.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is adjacent to TVA's maintenance base supporting the Big Sandy Dewatering Unit. A boat ramp and parking area are maintained on this parcel. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered. However, the type of facilities and uses would be limited due to the proximity to the maintenance base and dewatering unit.

Table 4-352. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	105
Stream Mile and Bank	Big Sandy River Mile 15R

Parcel 353 – (10.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a TVA maintenance base and the levees and pump house associated with the Big Sandy Dewatering Unit. The backlying land is used to support the dewatering unit. Requests for private water use facilities would not be considered.

Table 4-353. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–NE
TVA D–Stage Map Numbers	105 and 105–2
Stream Mile and Bank	Big Sandy River Mile 15B
Land Use/Land Cover	Pump house and levee
Known Dispersed Recreation Opportunities	Hunting, photography, wildlife observation, and fishing
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 354 – (3,033.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large size parcel begins at Big Sandy River Mile 15B and encompasses the Big Sandy Dewatering Unit and WMA. The features upland and bottomland forests, open agricultural lands, beaver ponds, and numerous high quality forested, scrub-shrub, and fringe emergent wetlands. Embankment plantings have been established on a portion of the parcel for erosion control on previously relocated roads.

Access is by boat and by several roads leading into the parcel. However, access to some portions of the parcel is limited by TWRA. This parcel receives substantial use for hunting for small and big game and waterfowl. This parcel is also used for fishing and wildlife observation opportunities. One state-listed plant species, a sedge (*Carex reniformis*), and one state and federally listed mammal, the Indiana bat, have been recorded within this parcel. An occupied roost tree was documented in this parcel. There is a high probability for the presence of cultural resources, but the area has not been surveyed. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-354. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton and Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–NE
TVA D–Stage Map Numbers	104
Stream Mile and Bank	Big Sandy River Mile 15B
Land Use/Land Cover	Historic hardwood tree plantings; upland and bottomland forests; forested, scrub-shrub, and emergent wetlands of high quality and function; managed wetlands associated with sub–impoundments
Known Dispersed Recreation Opportunities	Small and big game hunting, waterfowl hunting, fishing, and wildlife observation

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Revocable license to Benton County, Tennessee, Board of Public Utilities for electric utilities • Revocable license to Southern Bell Telephone for telephone lines • Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area • Revocable license to Tennessee Wildlife Resources Agency for management of the dewatering unit • Memorandum of Agreement with Louisville and Nashville Railroad for management of railroad tracks
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Cultural resources management activities • Possible expansion of wildlife observation opportunities in partnership with Tennessee Wildlife Resources Agency
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 355 – (22.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of a small tract of land located along the left descending bank of Big Sandy River Drainage Canal Mile 15.1. The parcel extends between TVA markers 104–41 and 104–42. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and agricultural fields. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, water use facilities will be limited to in size and nature due to the proximity of the dewatering unit. Potential impacts to the dewatering unit or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific programmatic and environmental review.

Table 4-355. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–NE
TVA D–Stage Map Numbers	104 and 105
Stream Mile and Bank	Big Sandy River Drainage Canal River Mile 15.1L

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Deciduous forest and agricultural fields
Fronts Former TVA Tract (s)	XGIR–283
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area • Revocable license to Tennessee Wildlife Resources Agency for management of the dewatering unit

Parcel 356 – (11.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of a small tract of land located along the left descending bank of Big Sandy River Drainage Canal Mile 15.1. The parcel extends between TVA markers 104–39 and 104–40. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and agricultural fields. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, water use facilities will be limited to in size and nature due to the proximity of the dewatering unit. Potential impacts to the dewatering unit or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific programmatic and environmental review.

Table 4-356. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–NE
TVA D–Stage Map Numbers	104 and 105
Stream Mile and Bank	Big Sandy River Drainage Canal River Mile 15.1L
Land Use/Land Cover	Deciduous forest and agricultural fields
Fronts Former TVA Tract (s)	XGIR–282
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area • Revocable license to Tennessee Wildlife Resources Agency for management of the dewatering unit

Parcel 357 – (23.6 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel is located along Clendenin Creek adjacent to and partially within Big Sandy WMA. This parcel is designated as Clendenin Creek HPA and was established in 1985 for protection of a state-listed non–flowering plant related to ferns. This parcel features upland and bottomland forests and open agricultural lands. Access to the parcel is by road. This parcel receives substantial small and big game hunting because of the proximity to the WMA.

No federally listed as endangered, threatened or special status species are known to occur on the parcel. The area previously hosted Black–footed quillwort (*Isoetes Melanopoda*), a primitive plant species listed as endangered in Tennessee. In recent years, there have been no recorded observations of the plant. In 2002, early successional forest appeared to have shaded out the plant, and in 2012, the plant could not be located. A biological inventory survey would provide further information to determine if other sensitive resources may be present. Coordination with TWRA for management and restoration of the plant habitat is a potential project. There is a high probability for the presence of cultural resources, but the area has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-357. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton and Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	20–NE
TVA D–Stage Map Numbers	104
Stream Mile and Bank	Big Sandy River Mile 14.3L
Land Use/Land Cover	Open agricultural lands for wildlife management and upland and bottomland forest
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	• Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area • Revocable license to Tennessee Wildlife Resources Agency for management of the dewatering unit

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Cultural resources management activities • Biological Inventory to determine if other threatened and endangered species are present • Restore the habitat for the sensitive plant
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 358 – (40.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the left descending bank Clendenin Creek and within the TWRA Big Sandy WMA. This parcel features bottomland forests; early successional hardwoods from previous timber harvests; open land managed by TWRA; high quality forested, scrub-shrub, and fringe emergent wetlands. Access is by boat and by TWRA access roads leading into the parcel. This parcel receives substantial use for small and big game and waterfowl hunting. This parcel is also used for fishing and wildlife observation opportunities. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-358. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton and Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	97 and 98
Stream Mile and Bank	Big Sandy River Miles 13.5–14L
Land Use/Land Cover	Bottomland forest, open lands, and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, fishing, and wildlife observation
Current Agreements/Commitments	Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Cultural resources management activities • Possible expansion of wildlife observation opportunities in partnership with Tennessee Wildlife Resources Agency
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 359 – (14.5 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel is located along the left descending bank of Big Sandy River and adjacent to the Big Sandy WMA. This parcel features bottomland riparian forests with minor shoreline fringe emergent wetlands. Access to the parcel is by boat and a road on the northern end of the parcel. This parcel receives limited public use due to the small and narrow configuration. There is a high probability for the presence of cultural resources. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-359. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	97
Stream Mile and Bank	Big Sandy River Miles 13.1–13.5L
Land Use/Land Cover	Riparian forests and shoreline fringe emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Letter of No Objection to a private individual for a fence
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 360 – (5.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Big Sandy River Mile 13.5. The parcel extends between TVA markers 97–55 to 97–57. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Lakeview Manor Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-360. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	97
Stream Mile and Bank	Big Sandy River Mile 13.5L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–545R
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 361 – (17.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located the left descending bank of Big Sandy River. The land use of a majority of this parcel is in perennial hay cover with the remainder in riparian hardwoods and early successional hardwoods. There are forested, scrub-shrub and fringe emergent wetlands that serve as riparian habitats along the shoreline. Access to the parcel is primarily by boat; therefore, public use of the parcel is limited. There is a term agricultural license for 5.6 acres in perennial hay and 9.7 acres for pasture. The agricultural area will converted to native warm season grasses for improved management of grassland wildlife species. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. There is one existing facility on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-361. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	97 and 98
Stream Mile and Bank	Big Sandy River Miles 12.5–12.8L
Land Use/Land Cover	Perennial hay, riparian hardwoods, and forested, scrub-shrub, and emergent wetlands along shoreline
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	• Term agricultural license for perennial hay and pasture • Approved private water use facility
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Continue conversion to NWSG perennial grassland cover
Potential Partners	Agricultural licensee

Parcel 362 – (15.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of the Big Sandy River. The area is under a revocable license to Country Junction Resort d for commercial recreation. Facilities at the resort include a campground, marina, swimming beach, play courts, and restaurant. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-362. Parcel Information

Location Component	Parcel Specific Information
County, State	Benton, Tennessee
TVA D–Stage Map Numbers	98
Stream Mile and Bank	Big Sandy River Mile 12.7L

Parcel 363 – (21.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the left descending bank of the Big Sandy River. The land use of a majority of this parcel is in perennial hay cover with the remainder in riparian and upland

hardwoods. There are forested, scrub-shrub, and fringe emergent wetlands that serve as riparian habitats along the shoreline. Access to the parcel is primarily by boat and from adjoining residential property on the south end of parcel. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-363. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	98
Stream Mile and Bank	Big Sandy River Miles 11.7–12.3L
Land Use/Land Cover	Perennial hay, riparian and upland hardwoods, and forested, scrub-shrub, and emergent wetlands along shoreline
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	Term agricultural license for perennial hay
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Explore partnership with agricultural licensee to convert to NWSG perennial grassland cover
Potential Partners	Agricultural licensee

Parcel 364 – (85.0 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This moderate size parcel is located along the left descending bank of the Big Sandy River. The land cover of this parcel is upland hardwood forests, loblolly pine stands, and scrub-shrub and emergent wetlands. Access to the parcel is primarily by boat; therefore, public use is limited. Camping and hunting for small and large game occur on this parcel. No federally or state-listed species are known to occur on this parcel. There is a high probability for the presence of cultural resources, and Bucy Cemetery is located on this parcel. There are existing large duck blinds along the portions of shoreline exposed during winter months. Requests for private water use facilities would not be considered.

Table 4-364. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	98
Stream Mile and Bank	Big Sandy River Miles 11.2–11.7L
Land Use/Land Cover	Upland hardwoods, loblolly pine, and scrub-shrub and emergent wetlands along shoreline
Known Dispersed Recreation Opportunities	Hunting and camping
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Possible small scale timber harvests to diversify wildlife habitat • Land Condition Assessments to determine other potential projects
Potential Partners	None identified

Parcel 365 – (46.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This moderate size parcel consists of two tracts of land adjacent to residential development. The land use this parcel includes forests; perennial hay; and forested, scrub-shrub, and fringe emergent wetlands. Embankments planting have been established on this parcel. Access to the parcel is primarily by boat; therefore, public use is limited. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources on the parcel. Requests for private water use facilities would not be considered.

Table 4-365. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	96
Stream Mile and Bank	Big Sandy River Miles 10.7–11.5L
Land Use/Land Cover	Historic hardwood tree plantings, perennial hay, and forested, scrub-shrub, and emergent wetlands along shoreline
Known Dispersed Recreation Opportunities	Hunting

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	Term agricultural license for perennial hay
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Explore partnership with agricultural licensee to convert to NWSG perennial grassland cover
Potential Partners	Agricultural licensee

Parcel 366 – (0.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Big Sandy River Mile 11. The parcel is located between the multiple tracts of land associated with Parcel 365. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Sandy Shores Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4-366. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Benton, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SE
TVA D–Stage Map Numbers	96
Stream Mile and Bank	Big Sandy River Mile 11L
Land Use/Land Cover	Maintained lawns
Fronts Former TVA Tract (s)	XGIR–666
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 367 – (5.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of West Sandy Creek. The parcel is under a revocable license to Britton Ford Campground for commercial recreation. Facilities provided at this area include a campground, marina, boat ramp, swimming pool, picnic pavilion,

and play courts. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-367. Parcel Information

Location Component	Parcel Specific Information
County, State	Henry, Tennessee
TVA D–Stage Map Numbers	89
Stream Mile and Bank	TRM 67L

Parcel 368 – (20.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of a contiguous tract of land and is located along the right descending bank of West Sandy River miles 2.3 to 3.2. This parcel extends between TVA marker 89–37 and Parcel 369. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Sandy Beach Estates Subdivision and Timberlake Subdivision are located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-368. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SW
TVA D–Stage Map Numbers	89 and 94
Stream Mile and Bank	West Sandy River Mile 2.6R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–670 and XGIR–299
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 369 – (14.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of a tract of land along the right descending bank of West Sandy River at the confluence of Hastings Branch. The land cover of this parcel is deciduous bottomland

forests; riparian forests; loblolly pine; and forested, scrub-shrub, and fringe emergent wetlands. In addition, embankment plantings were established on this parcel to protect relocated road embankments. Access to the parcel is by boat with limited road access. This parcel receives limited hunting; and overall has limited dispersed recreation opportunities. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-369. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SW
TVA D–Stage Map Numbers	94
Stream Mile and Bank	West Sandy River Mile 3.4–3.8R
Land Use/Land Cover	Historic hardwood tree plantings, deciduous bottomland forest and forested, scrub-shrub and fringe emergent wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	• Permanent easement to Henry County, Tennessee for a roadway • Revocable license to a private individual for electric utilities
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Assess possible agricultural use encroachment • Embankment plantings research
Potential Partners	None identified

Parcel 370 – (3.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of West Sandy River Mile 3. The parcel extends between TVA markers 94–93 to 94–94. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, any facility would be limited in size and subject to a favorable environmental and programmatic review. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-370. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SW
TVA D–Stage Map Numbers	94
Stream Mile and Bank	West Sandy River Mile 3R
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–669
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None

Parcel 371 – (36.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of a tract of land located along the right descending bank of West Sandy River at the confluence of Hastings Branch. The land cover of this parcel is deciduous bottomland forests; riparian forests; loblolly pine; and forested, scrub-shrub, and fringe emergent wetlands. In addition, there is agricultural use near the eastern portion of the parcel, and embankment plantings were established on the southernmost portion of this parcel to protect relocated road embankments. Access to the parcel is by boat and some road access. This parcel receives limited hunting; and overall has limited dispersed recreation opportunities. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources. There are existing facilities on and uses of this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-371. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SW
TVA D–Stage Map Numbers	94
Stream Mile and Bank	West Sandy River Mile 3.4–3.8R
Land Use/Land Cover	Historic hardwood tree plantings, deciduous bottomland forest and forested, scrub-shrub and fringe emergent wetlands
Known Dispersed Recreation Opportunities	Hunting

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Permanent easement to Henry County, Tennessee for a roadway • Revocable license to a private individual for electric utilities • Revocable license to a private individual for telephone lines
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Assess possible agricultural use encroachment • Embankment plantings research
Potential Partners	None identified

Parcel 372 – (1.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of West Sandy River Mile 3.2. The parcel extends between Parcel 371 to Parcel 373. This parcel lies entirely below the 375-foot msl, and the current land use is maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-372. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SW
TVA D–Stage Map Numbers	94
Stream Mile and Bank	West Sandy River Mile 3.2R
Land Use/Land Cover	Maintained lawns
Fronts Former TVA Tract (s)	XGIR–668
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None

Parcel 373 – (4.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of the West Sandy River. A public recreation easement (Tract No. XTGIR-96E) over the western portion of this parcel has been granted to the State of Tennessee. This portion of the parcel includes a boat ramp, pier, and parking lot maintained by TWRA. The western portion of the parcel, extending between TVA 94–91 to Parcel 375, is under a revocable license to Pleasant View Resort. Facilities at this commercial recreation area include a marina, swimming pool, rental cabins, and water park. The undeveloped areas have a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-373. Parcel Information

Location Component	Parcel Specific Information
County, State	Henry, Tennessee
TVA D–Stage Map Numbers	94
Stream Mile and Bank	West Sandy River Mile 3.3R

Parcel 374 – (6.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains the levees and pump house associated with the West Sandy Dewatering Unit. The backlying land is used to support the dewatering unit. Requests for private water use facilities would not be considered.

Table 4-374. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SW
TVA D–Stage Map Numbers	94
Stream Mile and Bank	West Sandy River Mile 3.5B
Land Use/Land Cover	Pump house and levee
Known Dispersed Recreation Opportunities	Hunting, photography, wildlife observation, and fishing
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	Tennessee Wildlife Resources Agency

Parcel 375 – (6,384.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large size parcel begins at West Sandy River Mile 3.5 and encompasses the West Sandy Dewatering Unit and WMA. This parcel features upland and bottomland forests; loblolly pine plantations; agricultural lands managed by TWRA; beaver ponds; and numerous high quality forested, scrub-shrub, and fringe emergent wetlands. Embankment plantings have been established on a portion of the parcel for erosion control and protection of relocated road embankments. Access to the parcel is by boat and by several roads under management of TWRA. This parcel receives substantial use for hunting of small and big game and waterfowl and includes a number of duck blinds managed by TWRA. This parcel is also used extensively for fishing and wildlife observation opportunities. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-375. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SW
TVA D–Stage Map Numbers	84, 90, 91, 93, 94, 99, 100, and 103
Stream Mile and Bank	West Sandy River Mile 3.5B
Land Use/Land Cover	Forested, scrub-shrub, emergent, and managed wetlands; upland and bottomland forest; and sub–impoundments; and historic hardwood tree plantings
Known Dispersed Recreation Opportunities	Hunting, fishing, and wildlife observation
Current Agreements/Commitments	• Revocable license to Henry County Public Utilities for electric utilities • Revocable license to Southern Bell Telephone for telephone lines • Revocable license to Tennessee Wildlife Resources Agency for a wildlife management area • Revocable license to Tennessee Wildlife Resources Agency for management of the dewatering unit

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Cultural resources management and survey activities • Possible expansion of wildlife observation opportunities • Wetland habitat enhancements
Potential Partners	• Tennessee Wildlife Resources Agency • U.S. Fish and Wildlife Service • Ducks Unlimited

Parcel 376 – (26.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of several small tracts of land containing roadways and located within the West Sandy Dewatering Unit. A portion of the parcel crosses the West Sandy River at mile 4.3 and contain a portion of Elkhorn Road, a Henry County roadway. Another portion of the parcel crosses the West Sandy Drainage Canal at mile 3.3 and contains a portion the alternative route for TSR 69. The parcel also crosses the West Sandy Drainage Canal at mile 5.5 and contains portions of US Route 641 and TSR 69. Requests for private water use facilities would not be considered.

Table 4-376. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SW and 20–NW
TVA D–Stage Map Numbers	94, 100, and 103
Stream Mile and Bank	West Sandy River Mile 4.3B West Sandy River Drainage Canal Mile 3.3B
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to Henry County, Tennessee for a roadway • Permanent easement to Tennessee Department of Transportation for a roadway • Revocable license to a private individual for electric utilities
Potential Projects	None identified
Potential Partners	None identified

Parcel 377 – (1.8 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land crossing the West Sandy Drainage Canal at mile 7.3 and contains a portion of Reynoldsburg Road. Requests for private water use facilities would not be considered.

Table 4-377. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SW and 20–NW
TVA D–Stage Map Numbers	94, 100, and 103
Stream Mile and Bank	West Sandy River Mile 4.3B West Sandy River Drainage Canal Mile 3.3B
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license for electric utilities
Potential Projects	None identified
Potential Partners	None identified

Parcel 378 – (11.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts and is located along the right descending bank of West Sandy River Drainage Canal. The parcel extends among TVA markers 100–47 to 100–48 and 100–49 to 100–50. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. The parcel is traversed by the alternative route for TSR 69. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-378. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SW
TVA D–Stage Map Numbers	100
Stream Mile and Bank	West Sandy River Drainage Canal Mile 3.5R
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–655 and XGIR–656
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to Southern Bell Telephone for telephone lines

Parcel 379 – (67.8 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel is located northwest of the West Sandy River Dewatering Unit and along Henson Branch. The parcel also lies adjacent to US Route 79 behind the Willie Borchert Rest Area Roadside Park. This parcel is proposed as the Henson Branch Histosol TVA HPA. Henson Branch meanders through the southern portion of the parcel. This area features a forested wetland and is characterized by a unique and rare soil typically only located along the southeastern coastal plain. These soils are Histosols, characterized by a thick organic layer, and are generally referred to as bogs, moors, peats and mucks. Histosols are 20 to 30 percent organic matter by weight and typically more than 40 centimeters thick. Histosols form in settings where restricted drainage inhibits the decomposition of plant and animal remains allowing organic materials to accumulate over time. As a result, Histosols are ecologically important because of the large quantities of carbon they contain. Histosols comprise 1.6 percent of soils types in the U.S. The soils series of this area has not been officially determined; therefore, partnership with the National Resource Conservation Service would be suggested to monitor developments regarding the official soil series name and potential research opportunities. In addition, the plant assemblage in this area is not typical with wetland obligate species growing within a few meters of facultative upland species. One state-listed plant species, the halberd-leaf tearthumb (*Polygonum arifolium*), and one state-listed amphibian, the four toed salamander (*Hemidactylium scutatum*) have been recorded within this parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing improvements are currently present, and requests for private facilities would not be considered.

Table 4-379. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SW
TVA D–Stage Map Numbers	91
Stream Mile and Bank	Henson Branch portion of the West Sandy Drainage Canal Mile 1.1B
Land Use/Land Cover	Forested wetlands, upland and bottomland hardwoods, rare Histosol soils, and unique plant assemblages
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	• Revocable license to Henry County Utilities for electric utilities • Revocable license to Southern Bell Telephone for telephone lines
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property, public lands, and habitat protection area signs along parcel boundaries and shoreline • Complete biological inventory • Cultural resources survey • Coordinate with Natural Resource Conservation Service for determination of final soil series name and research opportunities • Research opportunities with local schools
Potential Partners	• Natural Resource Conservation Service • Local Universities or colleges for research

Parcel 380 – (16.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of two small tracts of land containing roadways and located within the West Sandy Dewatering Area. Both tracts of land contain portions of US Route 79, TSR 76, and TSR 218. One tract crosses the Holly Fork Creek portion of the West Sandy Drainage Canal at mile 5.3, and the other tract crosses the Henson Branch portion of the West Sandy Drainage Canal at mile 1.1. Requests for private water use facilities would not be considered.

Table 4-380. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SW

Location Component and Public Involvement Opportunities	Parcel Specific Information
TVA D–Stage Map Numbers	84 and 91
Stream Mile and Bank	Holly Fork Creek portion of the West Sandy Drainage Canal Mile 5.3B Henson Branch portion of the West Sandy Drainage Canal Mile 1.1B
Land Use/Land Cover	road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Tennessee Department of Transportation for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 381 – (8.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of West Sandy River Mile 2.9. The parcel extends between TVA markers 94–90 to 94–74. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-381. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SW
TVA D–Stage Map Numbers	94
Stream Mile and Bank	West Sandy River Mile 2.9L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–667
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None

Parcel 382 – (26.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the left descending bank of the West Sandy River. The land cover of this parcel is deciduous bottomland forests; riparian forests; loblolly pine stands; and

forested, scrub-shrub, and fringe emergent wetlands that serve as riparian habitats along the shoreline. Access to the parcel is by boat. This parcel receives substantial waterfowl hunting based on observation of several existing duck blinds near and around the shoreline. No federally or state-listed species are known to occur on this parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present other than duck blinds, and requests for private water use facilities would not be considered.

Table 4-382. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–SW
TVA D–Stage Map Numbers	89 and 94
Stream Mile and Bank	West Sandy River Miles 2.1–3.2L
Land Use/Land Cover	Deciduous bottomland forest and forested, scrub-shrub, and fringe emergent wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	U.S. Fish and Wildlife Service

Parcel 383 – (28.3 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is located within the TNWR and is under a permanent industrial easement to Henry County, Tennessee, for and industrial site. The easement terms stipulate that no facilities will be constructed and no shippers will be admitted to the barge terminal without prior written approval by TVA and the USFWS. Since the industrial site is currently vacant, Henry County, TVA, and USFWS agreed to an interim use of the property for a public launching ramp, courtesy pier, and associated parking. The property remains allocated for industrial use to reflect the permanent industrial easement. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. Additional ground disturbance, either to support the interim recreation use or for new industrial development, would require an environmental review. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4-383. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	80
Stream Mile and Bank	Big Sandy River Mile 3.6L
Land Use/Land Cover	Deciduous forest, grasslands, and recreation
Current Agreements/Commitments	Permanent easement to Henry County, Tennessee, for a barge terminal and industrial site

---

Parcel 384 – (48.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is utilized for water oriented activities such as swimming, fishing, and boating. The backlying property is former TVA property (Tract Nos. XGIR-802 and XGIR-870) and was sold via Section 4(k)(a) of the TVA Act to the Reelfoot Girl Scout Council. The backlying property is currently used as a group camp and future development is restricted to recreational purposes. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-384. Parcel Information

Location Component	Parcel Specific Information
County, State	Henry, Tennessee
TVA D–Stage Map Numbers	77
Stream Mile and Bank	Big Sandy River Miles 2.9–3.4L

Parcel 385 – (56.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the right descending bank of Eagle Creek, a tributary to the Big Sandy River. A portion of the east side of the parcel is adjacent to the TNWR boundary. The land cover of a majority of this parcel is deciduous upland hardwoods with interspersed loblolly pine stands. This parcel contains minor fringe emergent wetlands that serve as riparian habitats along the shoreline. This parcel was the site of a former timber contract for pine plantation thinning operations. Access to the parcel is by boat and road. This parcel receives some hunting

by adjoining landowners. No federally or state-listed species are known to occur on this parcel. There is a moderate probability for the presence of cultural resources. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-385. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	77
Stream Mile and Bank	Big Sandy River Mile 1.9L
Land Use/Land Cover	Fringe emergent wetlands, deciduous upland forest, and loblolly pine plantations
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Address potential violations • Explore potential for additional loblolly pine thinning operations to enhance wildlife habitat
Potential Partners	None identified

Parcel 386 – (39.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Eagle Creek, a tributary to the Big Sandy River. There are four recreation related agreements covering this parcel.

The eastern most or upstream portion of the parcel is under a revocable license to Buchanan Condominiums for commercial recreation. Boat slips front this portion of the parcel.

A commercial recreation easement (Tract No. XGIR-867RE) extends between TVA markers 73–85 to 77–32. This easement area is managed as part of Buchanan Resort. Facilities on the easement area include a full service marina and boat ramp.

Immediately downstream from the Tract No. XGIR-867RE easement boundary, a revocable license has been issued to Pine Point Resort. Resort facilities include a marina, boat ramp, and campground.

TVA developed the Big Eagle Recreation Area on the portion of this parcel beginning at TVA marker 77–27. This facility is now operated by the private sector under a revocable license agreement for commercial recreation. Amenities in this area include a campground, picnic area, swimming beach, and boat ramp.

An undeveloped section of the parcel situated between Pine Point Resort and Big Eagle Recreation Area could potentially accommodate expansion of commercial recreation services. This undeveloped area has a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-386. Parcel Information

Location Component	Parcel Specific Information
County, State	Henry, Tennessee
TVA D–Stage Map Numbers	73 and 77
Stream Mile and Bank	Big Sandy River Mile 1.9L

Parcel 387 – (6.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of a contiguous tract of land and is located along the right descending bank of Eagle Creek, a tributary to the Big Sandy River. The parcel extends between Parcel 386 and TVA markers 73–10. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-387. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE

Location Component and Public Involvement Opportunities	Parcel Specific Information
TVA D–Stage Map Numbers	73
Stream Mile and Bank	Big Sandy River Mile 1.9L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–281
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 388 – (245.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel consists of two tracts of land and is located along both banks of Eagle Creek, a tributary to the Big Sandy River. The land cover of a majority of this parcel is deciduous upland hardwoods with interspersed loblolly pine stands. This parcel contains various types of wetlands that serve as riparian habitats along the shoreline. This parcel has established embankment plantings for erosion control for relocated road embankments. This area was also the site of previous pine plantation thinning operations. Access to the parcel is by boat and via several public roads. This parcel receives hunting for small and big game and waterfowl and is also utilized for wildlife observation. No federally or state-listed species are known to occur on this parcel. There is a moderate probability for the presence of cultural resources, but only a portion of the area has been surveyed. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-388. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE and 19–NW
TVA D–Stage Map Numbers	73
Stream Mile and Bank	Big Sandy River Mile 1.0L
Land Use/Land Cover	Forested, scrub-shrub, and fringe emergent wetlands; deciduous upland and bottomland forests; loblolly pine plantations; and historic hardwood tree plantings
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	• Revocable license to Southern Bell for telephone lines • Revocable license to Henry County Utilities for electric utilities

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Forestry assessment of loblolly pine stands for management needs • Continue forestry thinning operations in loblolly pine plantations to enhance wildlife habitat • Manage pine stands for Indiana bat habitat • Cultural resources survey • Enhance wildlife observation opportunities
Potential Partners	• U.S. Fish and Wildlife Service • Tennessee Wildlife Resources Agency

Parcel 389 – (24.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of six small tracts of land containing portions of US Route 79 and TSR 76. Three tracts of land are located adjacent to Eagle Creek; two tracts are located adjacent to Little Eagle Creek; and one tract is located adjacent to the Tennessee River. Requests for private water use facilities would not be considered.

Table 4-389. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NW and 19–NE
TVA D–Stage Map Numbers	73, 74, and 75
Stream Mile and Bank	Eagle Creek Mile 2.8B Little Eagle Creek Mile 0.6B TRM 66.3L
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to Tennessee Department of Transportation for a roadway • Revocable license to Tennessee Department of Transportation for a vehicular bridge
Potential Projects	None identified
Potential Partners	None identified

Parcel 390 – (3.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This very small parcel is located along the right descending bank of Eagle Creek, a tributary to the Big Sandy River. The tract extends between TVA markers 73–76 to Parcel 389. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, water use facilities will be limited to in size and nature due to the small size of this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-390. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NW
TVA D–Stage Map Numbers	73–D
Stream Mile and Bank	Eagle Creek Mile 2.8R
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–280
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to a private individual for electric utilities

Parcel 391 – (39.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three noncontiguous tracts of land and is located along the left descending bank of Eagle Creek, a tributary to the Big Sandy River. The three tracts extend among TVA markers 73–90 to 73–87; 73–89 to 73–107; and 73–105 to 73–86. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. It is traversed by US Route 79. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-391. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NW
TVA D–Stage Map Numbers	73
Stream Mile and Bank	Eagle Creek Mile 2.5L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–279
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to Southern Bell Telephone and Telegraph Company for telephone lines

Parcel 392 – (49.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of four noncontiguous tracts of land and is located along the left descending bank of Eagle Creek, a tributary to Big Sandy River. The four tracts extend among TVA markers 73–91 to 73–92; 73–94 to 73–97; 73–95 to 73–98; and 73–100 to 73–102. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-392. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	73
Stream Mile and Bank	Eagle Creek Mile 2.1L
Land Use/Land Cover	Deciduous forest, maintained lawns, and historic hardwood tree plantings
Fronts Former TVA Tract (s)	XGIR–278
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to Southern Bell Telephone and Telegraph Company for telephone lines • Embankment plantings

Parcel 393 – (2.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Eagle Creek and has been under a revocable license for commercial recreation. The parcel is currently undeveloped. However, its proximity to US Route 79 and location along a protected embayment make this parcel viable for future recreation development. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-393. Parcel Information

Location Component	Parcel Specific Information
County, State	Henry, Tennessee
TVA D–Stage Map Numbers	73
Stream Mile and Bank	Eagle Creek Mile 2L

Parcel 394 – (24.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three noncontiguous tracts of land and is located along the left descending bank of Eagle Creek. The three tracts of land extend among TVA markers 73–104 to 74–167; 74–168 to 74–172; and 74–170 to Parcel 397. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-394. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	73 and 74
Stream Mile and Bank	Eagle Creek Mile 1.9L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–273, XGIR–274, a portion of XGIR–275, XGIR–276, and XGIR–277
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 395 – (3.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank descending bank of Big Eagle Creek. The area is under a revocable license to Eagle Nest Marina for commercial recreation. Facilities on this parcel include a marina and restaurant. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-395. Parcel Information

Location Component	Parcel Specific Information
County, State	Henry, Tennessee
TVA D–Stage Map Numbers	74
Stream Mile and Bank	Eagle Creek Mile 1.8L

Parcel 396 – (1.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Little Eagle Creek, a tributary to Eagle Creek. The backlying property is former TVA property (Tract No. XTGIR-6) and was transferred to the State of Tennessee for public recreation. TWRA maintains a boat ramp and parking area on this parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-396. Parcel Information

Location Component	Parcel Specific Information
County, State	Henry, Tennessee
TVA D–Stage Map Numbers	74
Stream Mile and Bank	Little Eagle Creek Mile 0.1R

Parcel 397 – (14.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Little Eagle Creek, and the northern boundary is adjacent to US Route 79. This parcel is under a commercial recreation easement (Tract No. XTGIR-920RE) and has been developed as part of Little Eagle Creek RV Park. Facilities include a campground and boat ramp.

Table 4-397. Parcel Information

Location Component	Parcel Specific Information
County, State	Henry, Tennessee
TVA D–Stage Map Numbers	74
Stream Mile and Bank	Little Eagle Creek Mile 0.5R

Parcel 398 – (83.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of two tracts of land and is located along both banks of Little Eagle Creek, a tributary to Eagle Creek. The land cover of this parcel is bottomland hardwoods; loblolly pine; forested bottomland wetlands; and diverse shoreline scrub-shrub, fringe, and emergent wetlands. This parcel has established embankment plantings for erosion control along relocated road embankments. This parcel was also the site of a former timber contract for pine plantation thinning operations. Access to the parcel is by boat and public roads. This parcel receives hunting for small and big game and waterfowl and is also used for wildlife observation. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-398. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	74
Stream Mile and Bank	Little Eagle Creek Miles 0.6–1B
Land Use/Land Cover	Forested, scrub-shrub, fringe, and emergent wetlands; deciduous upland forest; bottomland forest; loblolly pine plantations; and historic hardwood tree plantings
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	• Revocable license to Southern Bell for telephone lines • Revocable license to Henry County, Tennessee Utilities for electric utilities

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Forestry assessment of loblolly pine stands for management needs • Continue forestry thinning operations in loblolly pine plantations to enhance wildlife habitat • Manage pine stands for Indiana bat habitat • Enhance wildlife observation opportunities • Embankment planting research
Potential Partners	• U.S. Fish and Wildlife Service • Tennessee Wildlife Resources Agency

Parcel 399 – (16.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Little Eagle Creek and is north of US Route 79. The tract extends between TVA markers 74–24 to Parcel 389. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-399. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	74
Stream Mile and Bank	Little Eagle Creek Mile 0.6L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–272
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to Southern Bell Telephone and Telegraph Company for telephone lines

Parcel 400 – (292.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel includes all TVA lands located adjacent to Paris Landing State Park. This parcel is under recreation easements (Tract No. XTGIR-113E and Tract No. XTGIR-119RE) to the State of Tennessee, and the property is managed as part of the park. Recreation facilities at Paris Landing State Park include a golf course, motel, rental cabins, restaurant, marina, boat ramps, campground, and day use facilities. The northern portion of this parcel also includes a 4.8-acre area under a revocable license with Riverdale Resort. The undeveloped areas have a moderate probability for the presence of cultural resources, but the area has not been surveyed.

Table 4-400. Parcel Information

Location Component	Parcel Specific Information
County, State	Henry, Tennessee
TVA D–Stage Map Numbers	74
Stream Mile and Bank	TRMs 66– 68L

Parcel 401 – (4.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is under a revocable license to the U.S. Coast Guard. The U.S. Coast Guard utilizes this land to store maintenance equipment, maintain office space, and associated parking. A loading dock, launching ramp, mooring pier, and wave break are present along the shoreline. Consistent with the contractual agreement, development of this parcel would be restricted to support the operations of the U. S. Coast Guard. There is a low probability for the presence of cultural resources, but the area has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-401. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	74
Stream Mile and Bank	TRM 66.1L
Land Use/Land Cover	Maintenance facility and associated structures
Known Dispersed Recreation Opportunities	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	Revocable license to the U.S. Coast Guard for a maintenance facility
Potential Projects	None identified
Potential Partners	None identified

Parcel 402 – (17.5acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three noncontiguous tracts of land and is located along the left descending bank of TRM 65. The three tracts of land extend among TVA markers 71–16 to 71–15; 71–44 to 71–45; and Parcel 403 to TVA marker 71–50. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Lookout Point and Swan Estates subdivisions are located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-402. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	71
Stream Mile and Bank	TRM 65L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–270, XGIR–271, XGIR–287, and XGIR–288
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 403 – (1.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of the Swan Bay inlet. The backlying property is former TVA property (Tract No. XTGIR-4) and transferred to the State of Tennessee for public recreation. TWRA maintains a boat ramp and parking area on the property. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed.

Table 4-403. Parcel Information

Location Component	Parcel Specific Information
County, State	Henry, Tennessee
TVA D–Stage Map Numbers	71
Stream Mile and Bank	TRM 65L

Parcel 404 – (34.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel consists of two tracts of land and is located north of Paris Landing State Park. The land cover for this parcel is bottomland forests with forested, scrub-shrub, fringe, and emergent wetlands that serve as riparian habitats along the shoreline. Access to the parcel is by boat and unapproved access roads. This parcel receives hunting for small and big game and is used for camping. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-404. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	71
Stream Mile and Bank	TRM 65L
Land Use/Land Cover	Bottomland forest and forested, scrub-shrub, fringe, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and camping
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Cultural resources survey • Dispersed recreation inventory
Potential Partners	None identified

Parcel 405 – (14.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is situated along the left descending bank of the Swan Bay inlet. A portion of the parcel is under license to The Breakers of Swan Bay for commercial recreation. The amenities include a marina, boat ramp, fishing pier, rental cabins, restaurant, and play courts. The parcel could potentially accommodate expansion of the licensed area. The undeveloped portions have a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-405. Parcel Information

Location Component	Parcel Specific Information
County, State	Henry, Tennessee
TVA D–Stage Map Numbers	71
Stream Mile and Bank	TRM 65L

Parcel 406 – (162.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of the Tennessee River. A majority of this parcel features upland deciduous forests with some scattered loblolly pine plantations present. This parcel also features some scattered scrub-shrub, fringe, and emergent wetlands that serve as riparian habitats in the back of coves. Access to the parcel is by boat and some unapproved access roads. There is an informal boat launch at the end of Beech Drive. A dispersed recreation inventory was conducted over this parcel in 2007. The results of the inventory identified three dispersed recreation use sites along the shoreline of this parcel. At that time, site impacts were considered minimal and were not candidates for management actions. This parcel is reported to receive substantial public use for bank fishing, hunting, boat launching, and abuse from ATV's in some locations. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-406. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	70 and 71
Stream Mile and Bank	TRMs 62.9–64.7L
Land Use/Land Cover	Deciduous forest, loblolly pine plantations, and scrub-shrub, fringe, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, bank fishing, and boat launching
Current Agreements/Commitments	Revocable license to Henry County, Tennessee, Utilities for electric utilities
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Address and monitor onsite ATV use and abuse
Potential Partners	None identified

Parcel 407 – (53.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of a contiguous tract of land and is located along the right descending bank of Prairie Branch and Cypress Creek. The parcel extends between TVA markers 70–93CC to 70–11F. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. TVA–developed Cypress Creek Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-407. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	70
Stream Mile and Bank	TRM 62.8L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–4

Location Component and Public Involvement Opportunities	Parcel Specific Information
Structure Profile	Varies
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 408 – (10.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the right descending bank of Cypress Creek and at the confluence with the Tennessee River. The land cover of this parcel is upland deciduous forests. Access to the parcel is by boat and from adjacent residential developments. This parcel receives some public use and it is surrounded by residential development. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-408. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	70
Stream Mile and Bank	TRM 62.6L
Land Use/Land Cover	Upland deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license to Henry County, Tennessee, Utilities for electric utilities
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey
Potential Partners	None identified

Parcel 409 – (40.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of a contiguous tract of land and is located along the right descending bank of Cypress Creek. The parcel extends between TVA markers 70–93CC to Parcel 410. This parcel lies mostly below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. TVA–developed Cypress Creek Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-409. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	70
Stream Mile and Bank	TRM 62.8L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–4 and XGIR–267
Structure Profile	Varies
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 410 – (9.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Cypress Creek. The backlying property is former TVA property (Tract No. XTGIR-3) and was transferred to the State of Tennessee for public recreation. TWRA maintains a boat ramp and parking area on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-410. Parcel Information

Location Component	Parcel Specific Information
County, State	Henry, Tennessee
TVA D–Stage Map Numbers	69
Stream Mile and Bank	TRM 62.7L

Parcel 411 – (18.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the right descending bank of Cypress Creek at Prairie Branch. The land cover of a majority of this parcel is bottomland forests with some scattered loblolly pine plantations present. This parcel also features some scattered scrub-shrub, fringe, and emergent wetlands that serve as riparian habitats. Previously, loblolly pine plantation forestry thinning operations have been conducted at two sites within the parcel. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions.

Access to the parcel is by boat and some public roads in nearby developed areas. This parcel receives limited public use and is surrounded by recreational and residential developments. There is evidence of some ATV abuse along portions of the shoreline that are exposed during winter months. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-411. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	69
Stream Mile and Bank	TRM 63L
Land Use/Land Cover	Bottomland forest, loblolly pine plantations, scrub-shrub, fringe, and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Address and monitor onsite ATV use and abuse
Potential Partners	None identified

Parcel 412 – (31.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the right descending bank of Cypress Creek. The two tracts of land extend among TVA marker 69–42 to Parcel 413 and Parcel 413 to 69–11. This parcel lies entirely below the 375-foot msl, and the current land use deciduous forest and maintained lawns. Cherry Island Subdivision is located on a portion of the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4-412. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	69 and 70
Stream Mile and Bank	Cypress Creek
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–266
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 413 – (2.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Cypress Creek and is under a revocable license to Cypress Creek Resort for commercial recreation. Facilities at this commercial recreation area include a marina, boat ramp, fishing pier, and rental cabins. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-413. Parcel Information

Location Component	Parcel Specific Information
County, State	Henry, Tennessee
TVA D–Stage Map Numbers	69
Stream Mile and Bank	TRM 62.7L

Parcel 414 – (10.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel consists of two tracts of land and located along both banks of Cypress Creek and at the mouth of Henderson Branch and Betsy Branch tributaries. The land cover of a majority of this parcel features bottomland forests. This parcel also features some forested, scrub-shrub, fringe, and emergent wetlands that serve as riparian habitats. Embankment plantings have been established on portions of the parcel for erosion control along relocated road embankments. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions.

There is limited access to the parcel by boat and from adjacent properties. This parcel receives limited public use and is surrounded by residential development. No federally or state-listed species are known to occur on the parcel. There is a low probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-414. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	65 and 69
Stream Mile and Bank	TRM 62.5L
Land Use/Land Cover	Historic hardwood tree plantings; bottomland forest; and forested, scrub-shrub, fringe, and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Embankment planting research
Potential Partners	None identified

Parcel 415 – (23.4 acres)

Proposed RLMP Allocation: Zone7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the both banks of Cypress Creek. The two tracts of land extend among TVA markers 69–26 to 69–27 and 69–31 to 69–38. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. The parcel is traversed by County Road 119 across Cypress Creek. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-415. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	65 and 69
Stream Mile and Bank	TRM 62.5L
Land Use/Land Cover	Deciduous forest and historic hardwood tree plantings
Fronts Former TVA Tract (s)	XGIR–264 and XGIR–265
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None identified

Parcel 416 – (1.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land containing a portion of TSR 119. Requests for private water use facilities would not be considered.

Table 4-416. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	65 and 69–D
Stream Mile and Bank	Cypress Creek Mile 2.5B
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Tennessee Department of Transportation for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 417 – (31.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along both banks of Cypress Creek. A majority of this parcel features bottomland forests. Cypress trees may be present in embankment plantings that were established to protect relocated road embankments. This parcel also features some bottomland forested, scrub-shrub, and fringe emergent wetlands that serve as riparian habitats. These wetlands also provide fish spawning and nursery habitat. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. There is access to the parcel via TSR119 through Parcel 415. This parcel receives limited public use for hunting. No federally listed as endangered, threatened or special status species are known to occur on this parcel. There are two state-listed fish species have been located in Billie Branch, a tributary to Cypress Creek, which drains into this parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-417. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	65 and 69
Stream Mile and Bank	Cypress Creek Mile 2.7B

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Historic hardwood tree plantings, bottomland forest, and forested, scrub-shrub, and fringe emergent wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Embankment planting research
Potential Partners	None identified

Parcel 418 – (20.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the left descending bank of Cypress Creek and left descending bank of TRM 62.3. The two tracts extend among TVA markers 65–31 to 65–32 and 69–23 to 69–25. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest and maintained lawns. Cypress Harbor and Harvest Hills subdivisions are located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-418. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky and Henry, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	65 and 69
Stream Mile and Bank	Cypress Creek Mile 2.1L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–194, XGIR–195, and XGIR–264
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 419 – (7.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel consists of two tracts of land and is located along the north side of Cypress Creek. A majority of this parcel features bottomland and riparian forests. This parcel also features some forested, scrub-shrub, and fringe emergent wetlands that serve as riparian habitats along the shoreline. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. There is limited boat access to the parcel and some access from adjacent properties. This parcel receives limited public use due to its small size and because it is surrounded by recreational and residential developments. No federally or state-listed species are known to occur on the parcel. There is a low probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-419. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Henry, Tennessee and Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	19–NE and 18–SE
TVA D–Stage Map Numbers	65
Stream Mile and Bank	Cypress Creek Mile 1.7L
Land Use/Land Cover	Forested, scrub-shrub, and fringe emergent wetlands and bottomland and riparian forest
Known Dispersed Recreation Opportunities	Limited hunting
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey
Potential Partners	None identified

Parcel 420 – (7.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Cypress Creek and is bisected by Cypress Trail Road or old KSR 121. A portion of the parcel is under a revocable license to Cypress Springs Resort for commercial recreation. Resort facilities currently include a marina,

boat ramp, motel, and restaurant. The portion of the parcel, upstream of Cypress Trail road, is currently undeveloped and could be made available for expansion of commercial recreation facilities. The undeveloped area has a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-420. Parcel Information

Location Component	Parcel Specific Information
County, State	Calloway, Kentucky and Henry, Tennessee
TVA D–Stage Map Numbers	65
Stream Mile and Bank	Cypress Creek Mile 1.6L

Parcel 421 – (11.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three noncontiguous tracts of land and is located along the left descending bank of Cypress Creek. The three tracts of land extend among TVA marker 65–111 to Parcel 420; TVA marker 65–29 to Parcel 419; and TVA marker 65–28 to Parcel 422. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. H.B. Bailey Subdivision is located on a portion of the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-421. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE and 19–NE
TVA D–Stage Map Numbers	65
Stream Mile and Bank	Cypress Creek Mile 1.4L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–192, XGIR–193 and XGIR–700
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 422 – (18.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Cypress Creek. The southern portion of this parcel is under a revocable license to Lakeview RV Resort for commercial recreation. This commercial recreation area provides camping and boat launching facilities. The northern portion of the parcel (extending between TVA markers 65–14 to 65–112) is under a revocable license to Lakeview Cottages for commercial recreation. This resort includes a marina, boat ramp, swimming beach, picnic facilities, campground, and rental cabins. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-422. Parcel Information

Location Component	Parcel Specific Information
County, State	Calloway, Kentucky
TVA D–Stage Map Numbers	65
Stream Mile and Bank	Cypress Creek Mile 1L

Parcel 423 – (14.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the left descending bank of Cypress Creek. A majority of this parcel features bottomland forests and high quality forested, scrub-shrub, and fringe emergent wetlands that serve as riparian habitats. Embankment plantings have been established on portions of the parcel for erosion control along relocated road embankments. Access to the parcel is by boat with some limited access and public use from adjoining landowners. This parcel does receive some ATV abuse and dumping of trash and litter. No federally or state-listed species are known to occur on this parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-423. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE
TVA D–Stage Map Numbers	65
Stream Mile and Bank	Cypress Creek Mile 0.8L
Land Use/Land Cover	Historic hardwood tree plantings; bottomland forest; and forested, scrub-shrub and fringe emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Embankment planting research • Monitor and control ATV impacts • Address dumping of trash and litter
Potential Partners	None identified

Parcel 424 – (15.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Cypress Creek and is under a revocable license to Missing Hill Resort for commercial recreation. This commercial recreation area includes a marina, swimming beach, picnic area, camping facilities, and rental cabins. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-424. Parcel Information

Location Component	Parcel Specific Information
County, State	Calloway, Kentucky
TVA D–Stage Map Numbers	65
Stream Mile and Bank	Cypress Creek Mile 0.7L

Parcel 425 – (120.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank Cypress Creek. The land cover of a majority of this parcel is upland deciduous forests with some scattered native pine present. This parcel also features some scattered scrub-shrub and fringe emergent wetlands that serve as riparian habitats. Access to the parcel is by boat and unimproved trails off a nearby public road. This parcel receives use by small and big game hunters and is used for camping. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. Historically, two land use permits were granted to KDFWR for wildlife management purposes. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-425. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	118–SE
TVA D–Stage Map Numbers	65 and 66
Stream Mile and Bank	Cypress Creek Miles 0.1–0.7L
Land Use/Land Cover	Upland deciduous forest, scattered native pine trees, and scrub-shrub and fringe emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and camping
Current Agreements/Commitments	Land use permit to KDFWR for management purposes
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Complete Lands Condition Assessments to determine other needs • Small scale timber harvests to diversify wildlife habitat • Control ATV use and abuse
Potential Partners	KDFWR

Parcel 426 – (28.1 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along the left descending bank of Cypress Creek at the confluence with the Tennessee River. The land cover of a majority of this parcel is upland deciduous forests with some scattered native pine present. Access to the parcel is by boat and from Fort Heiman Road. This parcel receives limited use due to relatively steep shoreline that precludes most reservoir/boat access. No federally or state-listed species are known to occur on the parcel. There is a historic site, Fort Heiman, located on the parcel. There is a high probability for the presence of cultural resources. In addition, this parcel contains a designated safety harbor for commercial barges and recreational boats during adverse weather conditions or equipment malfunction. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-426. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE and 19–NE
TVA D–Stage Map Numbers	66
Stream Mile and Bank	TRM 62.6L
Land Use/Land Cover	Upland deciduous forest and scattered native pine trees
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Cultural resource projects • Fort Heiman initiatives • Potential combination of the wildlife management area with Fort Heiman designation and future cultural resources initiatives
Potential Partners	Kentucky Department of Fish and Wildlife Resources

Parcel 427 – (4.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small island parcel is located at TRM 62. The land cover of a majority of this parcel features riparian forested, scrub-shrub, and fringe emergent wetlands that serve as riparian habitats. Access to the parcel is by boat only; therefore, public use is limited primarily to waterfowl hunting. No federally or state-listed species are known to occur on the parcel. However, the island parcel may be used by nesting wading and/or water birds including double–crested cormorants. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-427. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Stewart, Tennessee
Topographic Map (Sheet No. and Quadrant)	19–NE
TVA D–Stage Map Numbers	67
Stream Mile and Bank	TRMs 62.1–62.3R
Land Use/Land Cover	Riparian forest and forested, scrub-shrub, and fringe emergent wetlands
Known Dispersed Recreation Opportunities	Waterfowl hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Assess islands for wading/water bird impacts on island vegetation
Potential Partners	• Tennessee Wildlife Resources Agency • U.S. Department of Agriculture Wildlife Services

Parcel 428 – (476.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is located along the left descending bank of the Tennessee River between Fort Heiman Cemetery and Yellow Spring Branch. The land cover of a majority of this parcel is upland hardwoods and bottomland forests with some scattered loblolly pine plantations present. This parcel also features some high quality forested, scrub-shrub, and fringe emergent wetlands that serve as riparian habitats. Access to the parcel is by boat and some public roads in nearby

developed areas. This large parcel receives substantial use for small and big game hunting, camping, bank fishing, and ATV use and abuse. The property below the 375-foot msl is under a revocable license agreement to KDFWR for wildlife management. No federally or state-listed species are known to occur on this parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-428. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE
TVA D–Stage Map Numbers	62 and 66
Stream Mile and Bank	TRMs 59.8–61.8L
Land Use/Land Cover	Upland hardwoods, bottomland forest, scattered loblolly pine plantations, and forested, scrub-shrub and fringe emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, bank fishing, and camping
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for wildlife management purposes
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline Complete cultural resources survey • Address and monitor onsite ATV use and abuse • Onsite coordination and management in concert with KDFWR • Conduct scattered timber harvests to provide wildlife habitat diversity
Potential Partners	KDFWR

Parcel 429 – (3.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located near the mouth of the Shannon Creek and includes a public boat ramp and parking area. The facility was developed by TVA and is currently managed by the KDFWR under a license agreement. The undeveloped areas have a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-429. Parcel Information

Location Component	Parcel Specific Information
County, State	Calloway, Kentucky
TVA D–Stage Map Numbers	66
Stream Mile and Bank	TRM 60.4L

Parcel 430 – (46.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of several forested islands located between TRMs 55.6 and 60.5. The islands contain riparian bottomland hardwoods, scrub-shrub and fringe emergent wetlands. Access to the parcel is by boat only; therefore, public use is limited to waterfowl hunting and camping. No federally or state-listed as listed endangered, threatened or special status species are known to occur on the parcel. This parcel receives extensive use by nesting wading and/or water birds especially double–crested cormorants. These islands are under a revocable license to KDFWR for wildlife management. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-430. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE
TVA D–Stage Map Numbers	60,62, and 66
Stream Mile and Bank	TRMs 55.6–60.5B
Land Use/Land Cover	Forested islands, bottomland hardwoods, and forested, scrub-shrub and fringe emergent wetlands
Known Dispersed Recreation Opportunities	Waterfowl hunting and camping
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for wildlife management
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Coordinate cultural resources management activities with KDFWR • Assess islands for wading/water bird impacts on island vegetation • Potential shoreline stabilization
Potential Partners	• KDFWR • U. S. Department of Agriculture Wildlife Services

Parcel 431 – (74.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of TRM 59. The tract of land extends between TVA markers 62–35 to 62–39. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Crawford's Landing Subdivision is located on a portion of the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-431. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE
TVA D–Stage Map Numbers	62
Stream Mile and Bank	TRM 59L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–188; XGIR–189, XGIR–190, and XGIR–196
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 432 – (17.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel consists of one tract and is located along both banks of Keg Creek. A majority of this parcel is high quality forested, scrub-shrub, and emergent wetlands that serve as riparian habitats. Access to the parcel is by boat; therefore, public use is limited. This parcel also serves as a visual buffer from nearby shoreline development. This small parcel receives some use for small and big game hunting, waterfowl hunting, and wildlife observation. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-432. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE
TVA D–Stage Map Numbers	62
Stream Mile and Bank	TRM 58.6L
Land Use/Land Cover	Forested, scrub-shrub and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Coordinate cultural resources management activities with KDFWR • Wetlands and wildlife observation enhancement • Forest management to enhance wildlife habitat
Potential Partners	KDFWR

Parcel 433 – (28.5 acres)

Proposed RLMP Allocation: Zone7, Shoreline Access

This parcel is located along the left descending bank of TRM 58. The parcel extends between TVA markers 60–45 to 62–34. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Bailey Lakefront Estates Subdivision is located on a portion of the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-433. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE
TVA D–Stage Map Numbers	60 and 62
Stream Mile and Bank	TRM 58L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–186 and XGIR–187
Structure Profile	Elevation 381–foot mean sea level

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 434 – (56.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of the Tennessee River. The land cover of a majority of this parcel is high quality forested, scrub-shrub, and emergent wetlands. Access to the parcel is by boat; therefore, public use is limited. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. No federally or state-listed species are known to occur on the parcel. However, there is an active bald eagle nest on the parcel. There is a moderate probability for the presence of cultural resources, but only a portion of the area has been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-434. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE
TVA D–Stage Map Numbers	60
Stream Mile and Bank	TRM 57.6L
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for wildlife management purposes
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Coordinate cultural resources management activities with KDFWR • Wetlands enhancement • Forest management to enhance wildlife habitat
Potential Partners	KDFWR

Parcel 435 – (33.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the left descending bank of TRM 57. The two tracts of land extend among TVA markers 60–24 to 60–33 and 60–43 to 60–44. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Redwater Estates and Oakshores subdivisions are located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific programmatic and environmental review.

Table 4-435. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE
TVA D–Stage Map Numbers	60
Stream Mile and Bank	TRM 57L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–183, XGIR–184, and XGIR–185
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 436 – (47.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of TRM 55.5. The parcel extends between TVA markers 54–40 to 60–42. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Aldora, Pine Bluff Shores, Keniana Lakeshores, and Redwater Estates subdivisions are located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-436. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE
TVA D–Stage Map Numbers	54 and 60
Stream Mile and Bank	TRM 55.5L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–182, XGIR–183, XGIR–774, and XGIR–775
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 437 – (6.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Boyd's Branch at the confluence with the Tennessee River. TVA developed a public boat ramp and parking area at this location which is managed under a revocable license with KDFWR for public recreation.

Table 4-437. Parcel Information

Location Component	Parcel Specific Information
County, State	Calloway, Kentucky
TVA D–Stage Map Numbers	53
Stream Mile and Bank	TRM 54.5L

Parcel 438 – (38.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Boyd's Branch and left descending bank of the Tennessee River. The tract extends between TVA markers 53–40 to 54–41. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Aldora Subdivision is located on a portion of the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific programmatic and environmental review.

Table 4-438. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE
TVA D–Stage Map Numbers	54
Stream Mile and Bank	TRM 54.5L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–181, XGIR–182, and XGIR–548
Structure Profile	Varies
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 439 – (25.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along both banks of Boyd's Branch. The land cover of a majority of this parcel is high quality forested, scrub-shrub, and emergent wetlands that serve as riparian habitats. Access to the parcel is by boat; therefore, public use is somewhat limited. Wildlife observation and hunting for small and big game and waterfowl does occur on the parcel. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. No federally listed as endangered, threatened or special status species are known to occur on this parcel. The green treefrog (*Hyla cinerea*) is listed as special concern in Kentucky and has been found on this parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-439. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE
TVA D–Stage Map Numbers	54
Stream Mile and Bank	TRM 54.5L
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation opportunities
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Coordinate cultural resources management activities with KDFWR • Wetlands enhancement • Forest management to enhance wildlife habitat
Potential Partners	KDFWR

Parcel 440 – (58.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three noncontiguous tracts of land and is located along the left descending bank of Boyd's Branch. The three tracts of land extend among TVA markers 50–16 to 50–15; 50–14 to 53–43; and 53–6 to 53–9. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Ken Shores Estates and Howard's Bluff subdivisions are located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-440. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE
TVA D–Stage Map Numbers	50 and 54
Stream Mile and Bank	TRM 54L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–179, XGIR–180, and XGIR–706
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 441 – (14.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel consists of two tracts of land and is located along the left descending bank of Boyd's Branch. The land cover of this parcel is a mixture of upland hardwoods and grasslands. Access to the parcel is by boat and from Chandler Lane Road. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. This small parcel receives some camping, swimming, bank fishing, and unauthorized ATV use. Dumping of trash and litter has also been problematic on the parcel. No federally listed as endangered, threatened or special status species are known to occur on the parcel. The western pigmy rattlesnake (*Sistrurus miliarius streckeri*) is listed as threatened in Kentucky and has been found on this parcel. There is a moderate probability for the presence of cultural resources on the southern portion of this parcel. The northern portion of this parcel has a low probability for the presence of cultural resources. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-441. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE
TVA D–Stage Map Numbers	50 and 54
Stream Mile and Bank	TRM 53.7 and 54.5L
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Camping, swimming, and bank fishing
Current Agreements/Commitments	Revocable license agreement to the Commonwealth of Kentucky for wildlife management
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Conduct limits of acceptable change analysis to determine extent of dispersed use impacts • Control unauthorized ATV use
Potential Partners	None identified

Parcel 442 – (851.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is located along the right descending bank of Blood River and extends from the confluence with the Tennessee River to approximately Blood River Mile 5. The land cover this parcel is predominantly mixed pine/hardwood upland forest. There are some high quality forested, scrub-shrub and emergent wetlands that serve as riparian habitats. The wetland areas are located mainly in the back of coves and inlets along the shoreline.

Access to the parcel is by boat and public roads. Winchester Cemetery Road also crosses into TVA property on the upstream portion of this parcel. There is also an access corridor known as the Jennings Trail, which bisects large portions of the northern end of this parcel. Camping and bank fishing occur along Alexander Lane and Carlson Drive. In addition, extensive small and large game hunting occurs on the parcel. A dispersed recreation inventory has been conducted on this parcel. The analyses identified two areas, located between Blood River Miles 4 and 5, having moderate impacts and are considered candidates for management actions.

No federally listed as endangered, threatened or special status species are known to occur on the parcel. The midland smooth softshell turtle (*Apalone mutica mutica*) is listed as special concern in Kentucky and has been found in Blood River adjacent to the parcel. There is a high probability for the presence of cultural resources, but only a portion of the area has been surveyed. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-442. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE and 18–NE
TVA D–Stage Map Numbers	49, 50, and 53
Stream Mile and Bank	Blood River Miles 0–5R
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands; and mixed pine and upland hardwood forest
Known Dispersed Recreation Opportunities	Hunting, camping, and bank fishing
Current Agreements/Commitments	Land use permit to the U.S. Army Reserve Officer Training Corps (ROTC) for field exercises

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Coordinate cultural resources management activities with KDFWR • Determine status and use of Jennings Trail • Forest management to enhance wildlife habitat • Dispersed use trails development • Address all terrain vehicle use • Monitor for dispersed recreational impacts
Potential Partners	KDFWR

Parcel 443 – (59.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Blood River. The parcel extends between TVA markers 56–69 to 53–33. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Hurley Riley Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-443. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE and 18–SW
TVA D–Stage Map Numbers	53 and 56
Stream Mile and Bank	Blood River
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–175
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to Commonwealth of Kentucky for a wildlife management area

Parcel 444 – (50.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of two tracts of land and is located along Blood River and Grindstone Creek. The land cover of this parcel is high quality bottomland hardwoods; loblolly pine plantations; and forested, scrub-shrub, and emergent wetlands. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. There are embankment plantings established for erosion control that front relocated public road embankments.

Access to the parcel is by boat; therefore, public use is limited. This small parcel receives some small and big game and waterfowl hunting. No federally or state-listed as listed endangered, threatened or special status species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but only a portion of the area has been surveyed. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-444. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE
TVA D–Stage Map Numbers	56
Stream Mile and Bank	Blood River Miles 6–6.3R
Land Use/Land Cover	Historic hardwood tree plantings; bottomland hardwoods, loblolly pine plantations, and forested, scrub-shrub and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	• Revocable license to the Commonwealth of Kentucky for a wildlife management area • Revocable license to West Kentucky Rural Electric Cooperative for electric utilities

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Coordinate cultural resources management activities with KDFWR • Wetlands enhancement • Forest management to enhance wildlife habitat diversity • Embankment plantings research
Potential Partners	KDFWR

Parcel 445 – (27.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the right descending bank of Blood River. The two tracts of land extend among TVA markers 56–111 to 56–110 and 56–61 to 56–14. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. There is one record of a bald eagle nest within this parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-445. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE and 18–SW
TVA D–Stage Map Numbers	56
Stream Mile and Bank	Blood River Mile 6R
Land Use/Land Cover	Deciduous forest, maintained lawns, and historic hardwood tree plantings
Fronts Former TVA Tract (s)	XGIR–174 and XGIR–629
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 446 – (1,071.7 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This large and unique parcel is located along both banks of Blood River Miles 6 to 10. The land cover of this parcel is high quality bottomland forest, scrub-shrub, emergent and bog wetlands with high functions and values. Existing and proposed new HPAs are established around these unique wetlands and associated rare plant and animal species habitats. The parcel contains three TVA–designated natural areas: McCuiston Woods SWA, Panther Creek Swamp HPA, and the newly proposed Blood River HPA. There is a high probability for the presence of cultural resources, but only a portion of the area has been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

McCuiston Woods TVA SWA was established in 1974 for resources protection and is located near the right descending bank of Blood River Mile 8. The parcel is dominated by bottomland hardwood forest. The tract contains habitat for the state-listed long tail salamander, (*Eurycea longicauda)* and swamp rabbit (*Sylvilagus aquaticus*).

Panther Creek Swamp HPA contains a seep swamp located at the confluence of Panther Creek and the Blood River. Panther Creek HPA is also a proposed potential national natural landmark and Kentucky registered natural area. A registration agreement among TVA, Kentucky Nature Conservancy and Kentucky Nature Preserves Commission recognizes this area as ecologically significant and is listed on the Kentucky registry of natural areas. The Panther Creek HPA features mature bottomland hardwood forests that occupy the floodplain of the Blood River. Fringe emergent wetlands are also present providing habitat for a number of wetland plants considered rare in the Commonwealth of Kentucky.

The proposed Blood River HPA is located upstream of the KSR 121 Bridge near New Concord, Kentucky. The HPA contains seasonally–flooded bottomland hardwood forest; globally rare Coastal Plain forested acid seeps; tupelo marsh-slough habitats; and adjacent acidic sub xeric forests. The dominant species of the bottomland hardwood forest include red maple, box elder and river birch. Within parcel 446 there are records of yellow crowned night heron, three-lined salamander, northern pine snake, gray bat, evening bat and hair-like mock bishop-weed, all state-listed species. The Commonwealth of Kentucky has designated a state nature preserve

adjoining the southeastern portion of this area. These two areas could be established as the Blood River Preserve Site.

Table 4-446. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SW
TVA D–Stage Map Numbers	56, 57, and 58
Stream Mile and Bank	Blood River Miles 6–10B
Land Use/Land Cover	Historic hardwood tree plantings, bottomland hardwoods, perennial hay, and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, camping, wildlife observation, day hiking, and research
Current Agreements/Commitments	• Revocable license to the Commonwealth of Kentucky for a wildlife management area • Revocable license to West Kentucky Rural Electric Cooperative for electric utilities • Registration agreement among TVA, Kentucky Nature Conservancy and Kentucky Nature Preserves Commission recognizing Panther Creek Swamp HPA as ecologically significant
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Establish and designate new Blood River HPA in cooperation with Kentucky Nature Preserves Commission • Complete biological and cultural resources surveys • Coordinate cultural resources management activities with KDFWR • Wetlands enhancement and management • Forest management to enhance wildlife habitat diversity • Embankment plantings research • Implement natural areas management plan
Potential Partners	• KDFWR • Kentucky Nature Preserves Commission

Parcel 447 – (73.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three noncontiguous tracts of land and is located along the left descending bank of the Blood River. The parcel extends among TVA markers 56–92 to 57–82; 57–50 to 57–73; and 57–74 to 57–76. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, water use facilities will be limited to in size and nature due to the proximity of the Panther Creek Swamp HPA. Potential impacts to wetlands, natural areas, and/or cultural resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-447. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SW
TVA D–Stage Map Numbers	57
Stream Mile and Bank	Blood River Miles 7L, 8L, and 10B
Land Use/Land Cover	Deciduous forest, and historic hardwood tree plantings
Fronts Former TVA Tract (s)	XGIR–170, XGIR–171, XGIR–172, XGIR–173 and XGIR–621
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Revocable license to the Commonwealth of Kentucky for a wildlife management area • Revocable license to West Kentucky Rural Telephone Cooperative Corporation, Inc for telephone lines • Implement natural areas management plan

Parcel 448 – (31.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Blood River. The parcel extends between TVA markers 56–80 to 56–89. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Crappie Hollow Shores Subdivision is located on a portion of the backlying private property. There are records of two state-listed plant species within the is parcel, bunch flower (*Melanthium virginicum*) and swamp wedgescale

(*Sphenopholis pensylvanica*). Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-448. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SW
TVA D–Stage Map Numbers	56
Stream Mile and Bank	Blood River Miles 6–6.8L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–618,XGIR–619, XGIR–620, and XGIR–621
Structure Profile	Varies
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to Commonwealth of Kentucky for a wildlife management area

---

Parcel 449 – (18.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located on the left descending bank of the Blood River. The land cover of this parcel is high quality bottomland hardwoods; loblolly pine plantations; and forested, scrub-shrub, and emergent wetlands. Access to the area is by boat and adjoining developed areas. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Small and big game hunting occurs on the parcel. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-449. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SW
TVA D–Stage Map Numbers	56
Stream Mile and Bank	Blood River Miles 5.8 and 6.3L
Land Use/Land Cover	Bottomland hardwoods, loblolly pine plantations, and forested, scrub-shrub and emergent wetlands

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Coordinate cultural resources management activities with KDFWR • Conduct forest management activities to enhance wildlife habitat diversity
Potential Partners	KDFWR for various management purposes

Parcel 450 – (33.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Blood River. The parcel extends between TVA markers 56–90 and 56–91. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Lakeway Shores, Cedarling Hills, and Crappie Hollow Shores subdivisions are located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-450. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SW
TVA D–Stage Map Numbers	52 and 56
Stream Mile and Bank	Blood River Miles 5.7–6L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–617
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 451 – (26.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the left descending bank of the Blood River. The land cover of this parcel is high quality bottomland hardwoods; loblolly pine plantations; forested, scrub-shrub, and emergent wetlands that serve as riparian habitats. Access to the parcel is by boat and from adjoining developed areas. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Limited hunting occurs on the parcel due to the adjacent residential development. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-451. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SW
TVA D–Stage Map Numbers	52 and 53
Stream Mile and Bank	Blood River Mile 5L
Land Use/Land Cover	Bottomland hardwoods, loblolly pine plantations, and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Limited hunting
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Coordinate cultural resources management activities with KDFWR • Forest management to enhance wildlife habitat diversity
Potential Partners	KDFWR

Parcel 452 – (80.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts and is located along the right descending bank of Wildcat Creek and the left descending bank of the Blood River. The two tracts extend among TVA marker 52–48A to Parcel 453 and 53–42 to Parcel 453. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Panorama Shores Subdivision is located on a portion of the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-452. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SW
TVA D–Stage Map Numbers	52 and 53
Stream Mile and Bank	Wildcat Creek and Blood River
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–167, XGIR–168, XGIR–169, XGIR–546, and XGIR–682
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 453 – (5.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Wildcat Creek and the left descending bank of the Blood River. The area is under a license to Waters Edge Marina for commercial recreation. This commercial recreation area includes a marina, boat ramp, campground, picnic area, rental cabins, and play courts. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-453. Parcel Information

Location Component	Parcel Specific Information
County, State	Calloway, Kentucky
TVA D–Stage Map Numbers	52
Stream Mile and Bank	Blood River Mile 4.3L

Parcel 454 – (1,145.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is located along the left descending bank of the Blood River and stretches from Wildcat Creek (Blood River Mile 4.3L) to Sugar Creek (Blood River Mile 2.5L). The land cover of this parcel is upland and bottomland hardwoods; loblolly pine plantations interspersed; forested, scrub-shrub, and emergent wetlands that serve as riparian habitats.

Access to the parcel is by boat, paved public roads, and unimproved roads. There is an unimproved road near the Wildcat Creek portion of the parcel, and Parcel 455 can be accessed via Wildcat Beach Road. There is some unauthorized ATV access to the larger portion of the parcel north of the recreation area. The internal portions of the parcel are used for hunting, and the shoreline portions are used for fishing and camping. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-454. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SW and 18–NW
TVA D–Stage Map Numbers	48 and 52
Stream Mile and Bank	Blood River Miles 2–4.2L
Land Use/Land Cover	Upland and Bottomland hardwoods; loblolly pine plantations; and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, camping, and bank fishing
Current Agreements/Commitments	• Revocable license to the Commonwealth of Kentucky for a wildlife management area • Land use permit to the U.S. Army ROTC for field exercises

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Cultural Resources survey • Address all terrain vehicle use and dumping of trash and litter • Conduct limits of acceptable change analysis on existing campsites to determine level of impacts and management options • Conduct comprehensive land condition assessment to determine management options • Coordinate cultural resources management activities with KDFWR • Potential expansion of the wildlife management area
Potential Partners	• KDFWR • U.S. Army ROTC

Parcel 455 – (98.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Wildcat Creek, a tributary to the Blood River. A portion of this parcel was initially developed by TVA for public recreation and has been subsequently leased (Tract No. XGIR-932L) for commercial recreation. Facilities within the leased area include a campground, beach, and picnic area. The eastern portion of the parcel is under a revocable license to KDFWR for public recreation. The remaining undeveloped portion of this parcel may be developed to reduce user conflicts and better accommodate public boat ramp and parking needs. Potential partnerships in this effort could include TVA, KDFWR, and Calloway County, Kentucky. Undeveloped areas have a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-455. Parcel Information

Location Component	Parcel Specific Information
County, State	Calloway, Kentucky
TVA D–Stage Map Numbers	52
Stream Mile and Bank	Blood River Mile 2.3L

Parcel 456 – (16.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Sugar Creek. The tract extends between TVA markers 48–115 to 48–116. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. McKees Port Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-456. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NW
TVA D–Stage Map Numbers	48
Stream Mile and Bank	Blood River Mile 2.3L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–637
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 457 – (75.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the right descending bank of Sugar Creek, a tributary to the Blood River. This parcel features bottomland hardwoods with some loblolly pine plantations interspersed and high quality bottomland forested, scrub-shrub, and emergent wetlands that serve as riparian habitats. Access to the parcel is by boat and from nearby public roads. However, unauthorized ATV's may be accessing the parcel from Irvin Cobb Road.

This parcel receives some use for hunting and wildlife observation. No federally listed as endangered, threatened or special status species are known to occur on the parcel. The gold stripe darter (*Etheostoma parvipinne*), an endangered fish in Kentucky, has been found in Sugar Creek upstream of the parcel's boundary. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are present, and requests for private water use facilities would not be considered.

Table 4-457. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NW
TVA D–Stage Map Numbers	48
Stream Mile and Bank	Blood River Mile 2.3L
Land Use/Land Cover	Bottomland hardwoods, loblolly pine plantations, and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Address all terrain vehicle use • Conduct comprehensive land condition assessment to better determine overall management options • Enhance wildlife observation opportunities • Wetland habitat enhancements
Potential Partners	Kentucky Department of Fish and Wildlife Resources

Parcel 458 – (29.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of four noncontiguous tracts of land and is located along the right descending bank of Little Sugar Creek and left descending bank of Sugar Creek. The four tracts of land extend among TVA markers 48–77 to 48–78; 48–79 to 48–80; 48–81 to 48–108; and 48–107 to 48–86. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Irvin Cobb Subdivision, Irvin Cobb Resort, Don Faughn Subdivision, Roberson Subdivision, and Sugar Creek Subdivision are located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-458. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NW
TVA D–Stage Map Numbers	48
Stream Mile and Bank	Little Sugar Creek Miles 0.2–0.5R Sugar Creek Miles 0.7–1.7L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–164, XGIR–165, and XGIR–166
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

---

Parcel 459 – (5.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel consists of three tracts of land and is located along the right descending bank of Little Sugar Creek and the left descending bank of Sugar Creek. This parcel features primarily deciduous upland hardwoods with a small portion of fringe, scrub-shrub, and emergent wetlands that serve as riparian habitats. Access to the parcel is by boat and from nearby public roads. However, this parcel receives limited public use due to its small size. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are present, and requests for private water use facilities would not be considered.

Table 4-459. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NW
TVA D–Stage Map Numbers	48
Stream Mile and Bank	Little Sugar Creek Miles 0.1 and 0.4R Sugar Creek Mile 1.5L
Land Use/Land Cover	Upland hardwoods and forested, scrub-shrub and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 460 – (1.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Sugar Creek at the confluence of Little Sugar Creek. The southern portion of the parcel is under a revocable license to Sugar Creek Bay Marina for commercial recreation. Facilities at this commercial recreation area include a marina, boat ramp, and restaurant. The northern tip of the parcel is under a revocable license to Irvin Cobb Resort for commercial recreation. Resort facilities include a marina, fishing pier, picnic area, camping facilities and rental cabins. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-460. Parcel Information

Location Component	Parcel Specific Information
County, State	Calloway, Kentucky
TVA D–Stage Map Numbers	48
Stream Mile and Bank	Sugar Creek 0.7L

Parcel 461 – (494.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel consists of three tracts of land and is located along the left descending banks of Little Sugar Creek, Sugar Creek, and Blood River. This parcel features upland hardwoods, bottomland hardwoods with some loblolly pine plantations interspersed. This parcel also contains high quality bottomland forested, scrub-shrub, and emergent wetlands that serve as riparian habitats, especially in the Little Sugar Creek area. Access to the parcel is by boat and from several nearby public roads. Boatwright Trail road bisects the largest portion of this parcel and runs to Evans Cemetery. Several other informal roads appear to enter the parcel from Hopson Lane in the upper end of Hooper Hollow.

A dispersed recreation inventory was conducted in 2006, and the analysis identified three sites on this parcel with moderate associated impacts. These sites are considered for future management actions. This parcel receives a substantial amount of unauthorized use by ATV's. This parcel receives use for small and big game hunting. No federally listed as endangered, threatened or special status species are known to occur on this parcel. There are three state-

listed plant species known from the parcel. The hair–like mock bishop–weed (*Ptilimnium capillaceum*) is considered a threatened species, the longleaft stitchwort (*Stellaria longifolia*) and trepocarpus (*Trepocarpus aethusaeI)* are state-listed species of special concern. There is a moderate probability for the presence of cultural resources. There are existing facilities and activities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-461. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NW and 18–NE
TVA D–Stage Map Numbers	46, 48, and 49
Stream Mile and Bank	Blood River Miles 0.6–2.2L
Land Use/Land Cover	Upland and bottomland hardwoods, loblolly pine plantations, sod field, and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and camping
Current Agreements/Commitments	• Land use permit issued to U.S. Army ROTC for field drills • Revocable license to West Kentucky Rural Electric Cooperative for electric utilities • Term agricultural license for sod
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Address all terrain vehicle use/abuse • Trails development for hiking and/or biking • Selective timber harvests to enhance wildlife habitat diversity • Address dispersed recreation impacts
Potential Partners	Kentucky Department of Fish and Wildlife Resources

Parcel 462 – (4.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Sugar Creek and near the Boatwright community. The parcel is currently undeveloped. The parcel is well suited for a public boat ramp due to its location in a cove providing protection from wind and wave action. The proximity to Murray, Kentucky, also improves the potential for development. Potential partnerships in future

development of this parcel could include KDFWS and Calloway County, Kentucky. There is a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-462. Parcel Information

Location Component	Parcel Specific Information
County, State	Calloway, Kentucky
TVA D–Stage Map Numbers	48
Stream Mile and Bank	Sugar Creek Mile 0.4L

Parcel 463 – (5.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Blood River. The parcel extends between TVA markers 46–73 to 46–74. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-463. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NE
TVA D–Stage Map Numbers	46 and 49
Stream Mile and Bank	Blood River Mile 1.4L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–162
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None identified

Parcel 464 – (10.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

Kentucky Beach Resort is on this parcel. The backlying property is former TVA property (Tract No. XGIR-160) and was sold via Section 4(k)(a) of the TVA Act. The resort amenities include a marina, boat ramp, swimming beach, swimming pool, restaurant, motel, rental cabins, and play

courts. The undeveloped portions have a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-464. Parcel Information

Location Component	Parcel Specific Information
County, State	Calloway
TVA D–Stage Map Numbers	46
Stream Mile and Bank	Blood River Mile 0.8L

Parcel 465 – (27.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the left descending bank of the Tennessee River. The two tracts of land extend among TVA markers 46–208 to 46–158 and 46–155 to 46–172. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. TVA–developed Center Ridge Cabin Site Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-465. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NE
TVA D–Stage Map Numbers	46
Stream Mile and Bank	TRMs 50.8–51.4L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–2
Structure Profile	Varies
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 466 – (162.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of a contiguous tract of land along the left descending bank of the Tennessee River. This parcel features mixed hardwood/pine uplands, perennial hay, and high quality bottomland forested, scrub-shrub, and emergent wetlands that serve as riparian habitats. Access to the parcel is by boat, improved roads, and unimproved roads, and this area receives unauthorized ATV use. Small and big game hunting also occurs on this parcel. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-466. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NE
TVA D–Stage Map Numbers	46
Stream Mile and Bank	TRMs 49.9–50.6L
Land Use/Land Cover	Bottomland forests, mixed hardwood/pine upland forests, and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	Term agricultural license for perennial hay
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Address all terrain vehicle use/abuse
Potential Partners	None identified

Parcel 467 – (29.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River. The parcel extends between TVA markers 44–80B to 46–102. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Leisure Acres and Paradise Acres subdivisions are located on a portion of the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water

use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-467. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NE
TVA D–Stage Map Numbers	44 and 46
Stream Mile and Bank	TRMs 48.7–49.9L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–552, XGIR–553, XGIR–554, XGIR–555, XGIR–556, XGIR–557, and XGIR–558
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area • Revocable license to West Kentucky Rural Electric Cooperative Cooperation for electric utilities • Term agricultural license for perennial hay

Parcel 468 – (1.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is under a permanent easement (Tract No. XGIR-876RE) to American Paradise Resort for recreation. Resort facilities include a marina, boat ramp, swimming beach, swimming pool, rental cabins, picnic area, and play courts. The undeveloped area has a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-468. Parcel Information

Location Component	Parcel Specific Information
County, State	Calloway, Kentucky
TVA D–Stage Map Numbers	44
Stream Mile and Bank	TRM 48.8L

Parcel 468a – (5.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Snipe Creek and left descending bank of TRM 48.8. The parcel extends between TVA markers 44–49 to 44–81. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Blood River Estates Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4–468a.Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NE
TVA D–Stage Map Numbers	44
Stream Mile and Bank	TRM 48.8L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–550 and XGIR–551
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area • A permanent easement (XGIR–876RE) for recreation

Parcel 469 – (28.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along both banks of Snipe Creek, a tributary to TRM 48.7. This parcel features bottomland forested, scrub-shrub, and emergent wetlands of high quality and function. Historically, embankment plantings were established on portions of this parcel to protect relocated roadway embankments from erosion. Access to the parcel is by boat and Snipe Creek Drive. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-469. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NE
TVA D–Stage Map Numbers	44
Stream Mile and Bank	TRM 48.8L
Land Use/Land Cover	Historic hardwood tree plantings, bottomland forest and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Limited hunting use
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Embankment planting management/research
Potential Partners	Kentucky Department of Fish and Wildlife Resources

Parcel 470 – (28.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three noncontiguous tracts of land and is located along the left descending bank of TRM 48.4. The parcel extends among TVA markers 44–42 to 44–43; 44–44 to 44–46; and 44–47 to 44–48. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Green Valley Lake Subdivision is located on a portion of the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-470. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–SE
TVA D–Stage Map Numbers	44
Stream Mile and Bank	TRM 48.4L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–158, XGIR–767, XGIR–768, XGIR–769, XGIR–770, XGIR–771, XGIR–772, and XGIR–773
Structure Profile	Elevation 381–foot mean sea level

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 471 – (15.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel consists of two tracts of land and is located at the confluence of Snipe Creek and the Tennessee River. This parcel features bottomland forested, scrub-shrub, and emergent wetlands of high quality and function. Access to the parcel is by boat, Moser Lane, and Anchor Road. Hunting and camping occurs on the parcel. A dispersed recreation inventory was conducted in 2006, and the analysis identified six sites on this parcel with moderate dispersed use associated impacts. These sites are candidates for management actions. No federally listed as endangered, threatened or special status species are known to occur on the parcel. The plant, Trepocarpus (*Trepocarpus aethusae*), is a state-listed species of special concern and has been previously located on this parcel. There is a moderate probability for the presence of cultural resources. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-471. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NE
TVA D–Stage Map Numbers	44
Stream Mile and Bank	TRMs 48 and 48.4L
Land Use/Land Cover	Bottomland forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and camping
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Monitor and remediate dispersed recreation impacts
Potential Partners	Kentucky Department of Fish and Wildlife Resources

Parcel 472 – (16.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the left descending bank of TRM 48L. The parcel extends among TVA markers 44–44 to 44–46 and TVA markers 44–42 to 44–43. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-472. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NE
TVA D–Stage Map Numbers	41 and 44
Stream Mile and Bank	TRM 47L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–158, XGIR–767, XGIR–768, and XGIR–770
Structure Profile	Varies
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 473 – (25.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of TRM 48. This parcel features bottomland hardwoods and forested, scrub-shrub, and emergent wetlands of high quality and function. These wetlands also provide fish spawning and nursery habitat. Access to the parcel is by boat and unimproved trails from the adjoining private property. The parcel receives some small and big game hunting in addition to waterfowl hunting. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-473. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NE
TVA D–Stage Map Numbers	44
Stream Mile and Bank	TRM 47.9 L
Land Use/Land Cover	Bottomland hardwoods and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetland and bottomland hardwoods enhancement
Potential Partners	Kentucky Department of Fish and Wildlife Resources

Parcel 474 – (0.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the left descending bank of TRM 48. This parcel features scrub-shrub, emergent, and shoreline fringe wetlands of high quality and function. This parcel serves as riparian habitat and a visual buffer from nearby shoreline development. Access to the parcel is by boat and an adjoining road. The parcel receives some small and big game hunting in addition to waterfowl hunting. No federally or state-listed species are known to occur on the parcel. There is a low probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-474. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NE
TVA D–Stage Map Numbers	41
Stream Mile and Bank	TRM 46.9L
Land Use/Land Cover	Scrub-shrub, emergent, and fringe shoreline wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Determine if existing facility and use is an encroachment or violation
Potential Partners	Kentucky Department of Fish and Wildlife Resources

Parcel 475 – (45.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River. The parcel extends between TVA markers 40–72 to 41–15. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-475. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NE
TVA D–Stage Map Numbers	40 and 41
Stream Mile and Bank	TRMs 45.5–46.9L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–148, XGIR–149, XGIR–150, XGIR–151, XGIR–152, XGIR–153, XGIR–154, XGIR–155, XGIR–157, XGIR–158, XGIR–764, XGIR–765, and XGIR–766
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 476 – (35.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of four small tracts of land located along both banks of Anderson Creek. This parcel features bottomland forested, scrub-shrub, and emergent shoreline fringe wetlands of high quality and function. These wetlands also provide fish spawning and nursery habitat. Access to the parcel is by boat and adjacent roads. No federally listed as endangered, threatened or special status species are known to occur on the parcel. The chain pickerel (*Esox reticulatus*) is state-listed as a species of special concern and has been found in Anderson Creek. On the floodplain portion of this parcel, there is a moderate probability for the presence of cultural resources. There is a low probability for the presence of cultural resources on the steep slopes of the parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-476. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NE and 18–NW
TVA D–Stage Map Numbers	40
Stream Mile and Bank	TRM 45.5L
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Conduct land condition assessments to determine management options
Potential Partners	None identified

Parcel 477 – (41.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of four noncontiguous tracts and is located along both descending banks of Anderson Creek. The four tracts extend among TVA markers 40–59 to 40–60: TVA markers 40–61 to 40–62; TVA markers 40–63 to 40–64; TVA markers 40–65 to 40–66. This parcel lies

entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-477. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NW and 18–NE
TVA D–Stage Map Numbers	40
Stream Mile and Bank	TRM 45.5L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–146 and XGIR–147
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Permanent easement to Calloway County, Tennessee, for a roadway

Parcel 478 – (33.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the left descending bank of Anderson Creek and features mostly upland hardwoods with some mixed pine. This parcel also supports bottomland hardwoods with scrub-shrub and emergent shoreline fringe wetlands along portions of the shoreline.

Access to the parcel is by boat and Anderson Shores Drive. Limited hunting occurs on the parcel. A dispersed recreation inventory was completed in 2006. The analysis identified two dispersed recreation sites that are considered candidates for management actions. The sites are located along the shoreline near Anderson Shores Drive.

No federally listed as endangered, threatened or special status species are known to occur on the parcel. The chain pickerel (*Esox reticulatus*) is a state-listed as a species of special concern and has been found in Anderson Creek. There is a low probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-478. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NE
TVA D–Stage Map Numbers	40
Stream Mile and Bank	TRM 45.5L
Land Use/Land Cover	Bottomland and upland hardwoods, mixed pines, and scrub-shrub, emergent, and shoreline fringe wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Conduct land condition assessments to determine management options • Mitigate dispersed recreation site impacts on identified sites
Potential Partners	None identified

Parcel 479 – (28.9 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is an active industrial parcel located along the left descending bank of Anderson Creek at the confluence of the Tennessee River. Goodmar, Incorporated; Hutson Chemical Company, Incorporated; and Murray Harbor Services utilize this parcel to support their operations. The remainder of this parcel is in either deciduous forest or grassland. A site-specific environmental review will be conducted prior to any ground disturbance. Requests for use of TVA lands and associated water–based structures to support industrial purposes would be considered.

Table 4-479. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NE
TVA D–Stage Map Numbers	40
Stream Mile and Bank	TRM 45L
Land Use/Land Cover	deciduous forest, grasslands, and industrial sites
Current Agreements/Commitments	Permanent easement to Goodmar, Incorporated, for an industrial site

Parcel 480 – (71.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of the Tennessee River. This parcel features deciduous hardwoods and bottomland forested, scrub-shrub, and emergent shoreline fringe wetlands. These wetlands also provide fish spawning and nursery habitat. Access to the parcel is by boat, Watersport Road, and Emma Drive. Watersport Road leads to Parcel 481. Murray State University's Hancock Biological Station is accessed via Emma Drive. A dispersed recreation inventory was conducted in 2006, and the analysis identified four dispersed recreation sites that are considered as candidates for management actions.

No federally or state-listed species are known to occur on the parcel. There is a low probability for the presence of cultural resources. There are existing facilities including a boat dock and buildings associated with the Hancock Biological Station. Requests for use of TVA lands and associated water–based structures to support educational purposes associated with the Hancock Biological Station would be considered. However, requests for private water use facilities would not be considered.

Table 4-480. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Calloway, Kentucky
Topographic Map (Sheet No. and Quadrant)	18–NE
TVA D–Stage Map Numbers	40
Stream Mile and Bank	TRMs 44.4–45L
Land Use/Land Cover	Bottomland and deciduous hardwoods and bottomland forested, scrub-shrub, emergent, and shoreline fringe wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	Permanent Easement to the Commonwealth of Kentucky (Murray State University) for Hancock Biological Station
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Conduct land condition assessments to determine management options • Mitigate dispersed recreation site impacts on identified sites
Potential Partners	Murray State University–Hancock Biological Station

Parcel 481 – (1.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of the Tennessee River and is surrounded by Parcel 480. The parcel is under a revocable license agreement with KDFWR for public recreation, and they maintain a boat ramp and parking area on the parcel. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-481. Parcel Information

Location Component	Parcel Specific Information
County, State	Calloway
TVA D–Stage Map Numbers	40
Stream Mile and Bank	TRM 44.5L

Parcel 482 – (287.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of the Tennessee River between river miles 39.8 and 44.2. The parcel is under a permanent easement (Tract No. XTGIR-55E) to the Commonwealth of Kentucky for public recreation. The backlying property is former TVA property (Tract No. XTGIR-55) and was transferred to the Commonwealth of Kentucky for public recreation. This area is collectively managed as Kenlake State Resort Park. Park facilities include trails, golf course, marina, boat ramp, fishing pier, motel, rental cabins, picnic areas, swimming pool, and restaurant. There is one record of the state-listed plant oldenlandia within this parcel. The undeveloped areas have a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-482. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	29
Stream Mile and Bank	TRM 38.5L

Parcel 483 – (49.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located upstream of Jonathan Creek and along the left descending bank of the Tennessee River. This parcel features mostly upland hardwoods. Access to the parcel is by boat, improved roads, and unimproved roads. This parcel is located adjacent to substantial development; therefore, dispersed recreational use is limited. No federally or state-listed species are known to occur on the parcel. The level areas of the parcel have a moderate probability for the presence of cultural resources. The steep slopes have a low probability for the presence of cultural resources. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-483. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	30
Stream Mile and Bank	TRMs 38.8–39.8L
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license to Cedar Point Resort for commercial recreation
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 484 – (24.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along the right descending bank of Jonathan Creek near the confluence with the Tennessee River. This parcel features mostly upland hardwoods. Access is by boat and several roads leading into the parcel. This parcel is located adjacent to substantial development, and disperse recreational use is limited. No federally or state-listed species are known to occur on the parcel. The area has a high probability for the presence of cultural resources. No existing

shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-484. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	30
Stream Mile and Bank	TRM 39L
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Cultural resource protection
Potential Partners	None identified

Parcel 485 – (26.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of four noncontiguous tracts of land and is located along the right descending bank of Jonathan Creek Mile 1. The parcel extends among TVA markers 29–106A to 29–107A; 29–108A to 30–111A; 30–104 to 30–112; and 30–113 to 30–115. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. A portion of TVA–developed Jonathan Creek Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-485. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	29 and 30
Stream Mile and Bank	Jonathan Creek Mile 1R
Land Use/Land Cover	Deciduous forest and maintained lawns

Location Component and Public Involvement Opportunities	Parcel Specific Information
Fronts Former TVA Tract (s)	XGIR–564
Structure Profile	Varies
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 486 – (34.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is located along the right descending bank of Jonathan Creek. This parcel features bottomland hardwoods and shoreline fringe wetlands. Access to the parcel is by boat and developed adjacent property. This parcel receives limited public use for dispersed recreation. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-486. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	29 and 30
Stream Mile and Bank	Jonathan Creek Miles 0.5–0.9R
Land Use/Land Cover	Shoreline fringe wetlands and bottomland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline
Potential Partners	None identified

Parcel 487 – (13.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Wolf Creek, a tributary to Jonathan Creek. This area is under a revocable license to Town and Country Resort for commercial recreation. Resort facilities include a marina, boat ramp, campground, motel, rental cabins,

swimming pool, and restaurant. The undeveloped portion of this parcel has a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-487. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	29
Stream Mile and Bank	Jonathan Creek 1.4R

Parcel 488 – (16.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Jonathan Creek. The parcel extends between Parcel 487 and Parcel 489. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. A portion of TVA-developed Jonathan Creek Subdivision is located on the back-lying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-488. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	28 and 29
Stream Mile and Bank	Jonathan Creek Miles 1.2–2.2R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–564 and XGIR–628
Structure Profile	Varies
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 489 – (0.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small and narrow parcel is located along the right descending bank of Jonathan Creek. This parcel features bottomland hardwoods. Access to the parcel by boat is limited. However, there is also access from adjacent property; however, the parcel receives limited use due to substantial adjacent development. No federally or state-listed species are known to occur on the parcel. There is a low probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-489. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	29
Stream Mile and Bank	Jonathan Creek Mile 2.2R
Land Use/Land Cover	Bottomland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Monitor for encroachments from back lying private property
Potential Partners	None identified

Parcel 490 – (4.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Jonathan Creek. The parcel extends between Parcel 489 and Parcel 491. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. A portion of TVA-developed Jonathan Creek Subdivision is located on the back-lying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting

mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-490. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	28 and 29
Stream Mile and Bank	Jonathan Creek Miles 1.2–2.2R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–564
Structure Profile	Varies
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 491 – (6.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along right descending bank of Jonathan Creek and is bisected by US Route 68. The portion of the parcel lying downstream of US Route 68 adjoins Harry Waterfield Park. The backlying property is former TVA property (Tract No. XTGIR-24) transferred to the Commonwealth of Kentucky for public recreation. The amenities include a boat ramp and parking area. The portion of this parcel situated upstream of US Route 68 adjoins Sportsman Anchor Resort and Marina. Facilities at this commercial recreation area include a marina, boat ramp, campground, motel, rental cabins, swimming pool, and restaurant. The undeveloped portion of this parcel has a moderate probability for the presence of cultural resources.

Table 4-491. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	28
Stream Mile and Bank	Jonathan Creek Mile 2.5R

Parcel 492 – (5.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land containing a portion of US Route 68. There is a moderate probability for the presence of cultural resources in the undisturbed portions of this parcel. Requests for private water use facilities would not be considered.

Table 4-492. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	28
Stream Mile and Bank	Jonathan Creek Mile 2.5B
Land Use/Land Cover	Road right–of–way and grasslands
Known Dispersed Recreation Opportunities	bank fishing
Current Agreements/Commitments	• Permanent easement to the Commonwealth of Kentucky for a roadway • Permanent easement to the Jonathan Creek Water District for a water pipeline • Term easement to the City of Benton, Kentucky, for a natural gas pipeline
Potential Projects	None identified
Potential Partners	None identified

Parcel 493 – (25.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Jonathan Creek Mile 3. The parcel extends between TVA markers 32–77 to Parcel 491. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Jonathan Shores Subdivision and Alice Levey Estates are located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-493. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	28 and 32
Stream Mile and Bank	Jonathan Creek Mile 3R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–12, XGIR–13, XGIR–14, and XGIR–19
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Term easement for a roadway

Parcel 494 – (30.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

The parcel is managed as part of the Jonathan Creek Camp and Conference Center. The backlying property is former TVA property (Tract No. XGIR-11) and was sold via Section 31 of the TVA Act for group camp use. The shoreline parcel is utilized for water–based camp activities such as swimming, fishing, and boating. There is a high probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-494. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	32
Stream Mile and Bank	Jonathan Creek Miles 3.8–4.1R

Parcel 495 – (5.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the right descending bank of Jonathan Creek Mile 4.2. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Pirate's Cove Subdivision is located on a portion of the backlying private property. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-495. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	32
Stream Mile and Bank	Jonathan Creek Mile 4.2R
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–597
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area

---

Parcel 496 – (22.1 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along both banks of Clear Creek, a tributary to Jonathan Creek. This parcel features bottomland forested wetlands and shoreline fringe, scrub-shrub, and emergent wetlands. Previous agricultural fields have reverted to early successional bottomland hardwoods. Access to the parcel is by boat and from the adjacent property. Small and big game and waterfowl hunting occurs on the parcel. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-496. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	32
Stream Mile and Bank	Jonathan Creek Mile 4.2 R
Land Use/Land Cover	Bottomland wetlands, bottomland hardwoods, and scattered pines
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Coordinate cultural resources management activities with KDFWR • Wetlands protection • Assess cultural resource protection and/or management needs
Potential Partners	KDFWR

Parcel 497 – (17.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Jonathan Creek mile 4.2. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Pirate's Cove Subdivision is located on a portion of the backlying private property. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-497. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	32
Stream Mile and Bank	Jonathan Creek Mile 4.2R
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–596
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 498 – (67.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This very small parcel is located along the right descending bank of Jonathan Creek. This area is under an easement (Tract No. XGIR-871RE) to Pirate's Cove for commercial recreation. The

amenities include a marina, boat ramp, campground, beach, swimming pool, motel, rental cabins, play courts, and a golf course. This parcel has not been surveyed for cultural resources. Although mostly developed, there is a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-498. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	32
Stream Mile and Bank	Jonathan Creek Miles 4.4–5.3R

Parcel 499 – (2.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel consists of two small tracts of land located along the right descending bank of Jonathan Creek. This parcel features deciduous hardwoods, scattered loblolly pine stands, and bottomland forested wetlands. Access to the parcel is by boat and from the adjacent TVA property. This parcel receives limited use due to the surrounding residential development. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-499. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	32
Stream Mile and Bank	Jonathan Creek Mile 5.4R
Land Use/Land Cover	Deciduous hardwoods, pines, and bottomland forested wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Coordinate cultural resources management activities with KDFWR • Assess cultural resource protection and/or management needs
Potential Partners	KDFWR

Parcel 500 – (33.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the right descending bank of Jonathan Creek Mile 5.9. The parcel extends among TVA markers 32–84 to 32–85 and 32–39 to 32–38. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Pirate's Cove Subdivision is located on a portion of the backlying private property. Water use facilities have been constructed along a portion of the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-500. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	32
Stream Mile and Bank	Jonathan Creek Miles 5.4–5.9R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–144
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 501 – (55.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of two tracts of land located along both banks at Jonathan Creek Mile 6. In addition to bottomland hardwoods, this parcel features high quality and functioning bottomland forested, fringe, scrub-shrub, and emergent wetlands. Access to the parcel is by boat and from KSR 402. This parcel is used for hunting and wildlife observation with unauthorized ATV use also occurring. Historically, embankment plantings were established on portions of this parcel to protect relocated roadway embankments from erosion. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-501. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	32 and 33
Stream Mile and Bank	Jonathan Creek Mile 6B
Land Use/Land Cover	Historic hardwood tree plantings; bottomland hardwoods; and bottomland forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Coordinate cultural resources management activities with KDFWR • Assess cultural resource protection and/or management needs • Embankment plantings for forestry management needs • Embankment plantings research • Enhance wildlife observation opportunities
Potential Partners	KDFWR

Parcel 502 – (12.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a small tract of land containing a portion of the KSR 402. Requests for private water use facilities would not be considered.

Table 4-502. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	32 and 33
Stream Mile and Bank	Jonathan Creek Mile 6B
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	bank fishing
Current Agreements/Commitments	Permanent easement to the Commonwealth of Kentucky for a roadway
Potential Projects	None identified
Potential Partners	None identified

Parcel 503 – (237.9 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This large parcel consists of three tracts located along both banks of Jonathan Creek and upstream of the KSR 402 Bridge. In addition to bottomland hardwoods, this parcel features high quality and functioning bottomland forested, fringe scrub-shrub, and emergent wetlands. These wetlands also provide fish spawning and nursery habitat. Access to the parcel is by boat and KSR 402. Hunting and wildlife observation occur on this parcel. This area is a featured hunting area promoted by KDFWR. Historically, embankment plantings were established on portions of this parcel to protect relocated roadway embankments from erosion. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-503. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	32 and 33
Stream Mile and Bank	Jonathan Creek Mile 6B
Land Use/Land Cover	Historic hardwood tree plantings; bottomland hardwoods; and bottomland forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Coordinate cultural resources management activities with KDFWR • Assess cultural resource protection and/or management needs • Embankment plantings for forestry management needs • Embankment plantings assessment and research • Enhance wildlife observation opportunities • Wetlands management and enhancement
Potential Partners	KDFWR

Parcel 504– (0.8 acres)

Proposed RLMP Allocation: Zone6, Developed Recreation

This parcel is located along the right descending bank of Jonathan Creek and adjacent to KSR 80. The area is under a revocable license to KDFWR for public recreation purposes. The amenities include a boat ramp and parking area. The area has a high probability for the presence of cultural resources in undeveloped areas. It has not been surveyed for cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-504. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	32
Stream Mile and Bank	Jonathan Creek Mile 6R

Parcel 505 – (91.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along both banks of Jonathan Creek Mile 6. The tract extends among TVA markers 33–26 to 33–28 and 33–32 to 33–29. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, water use facilities will be limited to in size and nature due to the proximity of the sensitive resource management areas and high quality wetlands. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-505. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	33
Stream Mile and Bank	Jonathan Creek Mile 6.1B
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–142 and XGIR–143
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 506 – (46.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts and is located along the left descending bank of Jonathan Creek Mile 5.2. The parcel extends among TVA markers 32–90 to 32–91 and 32–92 to 32–46. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along a portion of the shoreline, and future requests for private water use facilities would be considered.

Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-506. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	32
Stream Mile and Bank	Jonathan Creek Mile 5.2L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–571 and XGIR–595
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

---

Parcel 507 – (31.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of Jonathan Creek. In addition to bottomland hardwoods at different successional stages, this parcel features high quality and functioning bottomland forested, scrub-shrub, and fringe emergent wetlands. These wetlands also provide fish spawning and nursery habitat. Access to the parcel is by boat. This parcel is used for wildlife observation and hunting. Historically, embankment plantings were established on portions of this parcel to protect relocated roadway embankments from erosion. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-507. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	32
Stream Mile and Bank	Jonathan Creek Mile 5.4 L
Land Use/Land Cover	Historic hardwood tree plantings, bottomland hardwoods, and bottomland forested, scrub-shrub, emergent wetlands

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Coordinate cultural resources management activities with KDFWR • Assess cultural resource protection and/or management needs • Embankment plantings for forestry management needs • Embankment plantings research • Enhance wildlife observation opportunities • Conduct cultural resources survey
Potential Partners	KDFWR

Parcel 508 – (43.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of Jonathan Creek near Barnett Cemetery. This parcel features bottomland and riparian forests and bottomland forested, scrub-shrub, and fringe emergent wetlands. These wetlands also provide fish spawning and nursery habitat. Access to the parcel is by boat and by adjacent property. This parcel is used for hunting small and big game and waterfowl. A dispersed recreation inventory was conducted in 2006. The analysis identified three dispersed recreational use sites along the downstream portion of this parcel. These sites had a moderate level of impacts and were not considered as candidates for management actions. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-508. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	32
Stream Mile and Bank	Jonathan Creek Miles 4.4–5.1L
Land Use/Land Cover	Bottomland hardwoods, riparian forest, and bottomland forested, scrub-shrub, emergent wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Coordinate cultural resources management activities with KDFWR • Assess cultural resource protection and/or management needs • Conduct cultural resources survey
Potential Partners	KDFWR

Parcel 509 – (52.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the left descending bank of Jonathan Creek Mile 4. The two tracts extend among TVA markers 28–81 to 32–89 and 32–88 to 32–87. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-509. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	28 and 32
Stream Mile and Bank	Jonathan Creek Miles 3.5–4.2L

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–139, XGIR–140, and XGIR–141
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 510 – (28.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of two tracts of land located along the left descending bank of Jonathan Creek, a tributary to the Tennessee River. This parcel features bottomland hardwoods; loblolly pines; and bottomland hardwood forested, scrub-shrub, and fringe emergent wetlands. These wetlands also provide fish spawning and nursery habitat. Access to the parcel is primarily by boat, and there are no obvious public roads on or adjacent to the parcel. This parcel is used for hunting and wildlife observation. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-510. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	28 and 32
Stream Mile and Bank	Jonathan Creek Mile 3.5 and 4.3L
Land Use/Land Cover	Bottomland hardwoods, loblolly pines, and bottomland forested, scrub-shrub, emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Coordinate cultural resources management activities with KDFWR • Assess cultural resource protection and/or management needs • Conduct cultural resources survey

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Partners	KDFWR

Parcel 511 – (46.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the right descending bank of West Branch Ruff Creek, a tributary to Jonathan Creek Mile 3. The two tracts extend among TVA markers 28–89 to Parcel 512 and 28–22 to Parcel 512. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-511. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	28
Stream Mile and Bank	West Branch Ruff Creek 0.7R Jonathan Creek Mile 3L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–138
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None identified

Parcel 512 – (3.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of the West Branch Ruff Creek at the confluence of Jonathan Creek. This area is under a revocable license to Cedar Knob Resort for commercial recreation. Resort facilities include a marina, boat ramp, swimming beach, rental cabins, and play courts. There is a high probability for the presence of cultural resources in the undeveloped areas. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-512. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	28
Stream Mile and Bank	Jonathan Creek Mile 3L

Parcel 513 – (94.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of three tracts of land located along both banks of West Branch Ruff Creek, a tributary to Jonathan Creek. This parcel features bottomland hardwoods; loblolly pines; and high quality and functioning bottomland hardwood forested, scrub-shrub, and fringe emergent wetlands. These wetlands also provide fish spawning and nursery habitat. Historically, embankment plantings were established on portions of this parcel to protect relocated roadway embankments from erosion. Access to the parcel is primarily by boat, and there are no obvious public roads on or adjacent to the parcel. This area is used for hunting small and large game and waterfowl as well as for wildlife observation. There were previous term agricultural licenses on this parcel; however, aerial photography shows that these areas have reverted to bottomland hardwoods. No federally or state-listed species are known to occur on the parcel. A bald eagle nest is located on private property adjacent to the West Branch Ruff Creek drainage and generally southwest of parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-513. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	28
Stream Mile and Bank	Jonathan Creek Mile 2.8L
Land Use/Land Cover	Historic hardwood tree plantings; bottomland hardwoods; scattered loblolly pines; and bottomland forested, scrub-shrub, emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Embankment planting research • Conduct land condition assessments to determine management options • Conduct forest regeneration inventory for previous agricultural licensed areas
Potential Partners	None identified

Parcel 514 – (11.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along both banks of West Branch Ruff Creek. The parcel extends among TVA markers 28–97 to 28–96 and 28–95 to 28–33A. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, water use facilities will be limited to in size and nature due to the proximity of a large wetland fronting the parcel. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-514. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	28
Stream Mile and Bank	West Branch Ruff Creek Mile 0.9B
Land Use/Land Cover	Deciduous forest and historic hardwood tree plantings
Fronts Former TVA Tract (s)	XGIR–593 and XGIR–594
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None identified

Parcel 515 – (36.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three noncontiguous tracts of land and is located along the left descending bank of West Branch Ruff Creek. The three tracts extend among TVA markers 28–103 to 28–102; 28–101 to 28–100; and 28–99 to 28–98. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Sassy Land Subdivision is located on a portion of the backlying private property. Water use facilities have been constructed along portions of the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-515. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	28
Stream Mile and Bank	West Branch Ruff Creek Miles 0.3 –0.7L
Land Use/Land Cover	Deciduous forest, maintained lawns, and historic hardwood tree plantings
Fronts Former TVA Tract (s)	XGIR–570, XGIR–591, and XGIR–592
Structure Profile	Varies
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 516 – (15.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel consists of three tracts of land located along Ruff Creek, a tributary to Jonathan Creek. This parcel features bottomland hardwoods, riparian forests, and bottomland hardwood forested, scrub-shrub, and fringe emergent wetlands. These wetlands also provide fish spawning and nursery habitat. Access to the parcel is by boat, roads, and adjacent property. A portion of the parcel may receive some small and big game hunting. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. There are existing facilities and/or activities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-516. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	28
Stream Mile and Bank	Jonathan Creek Mile 2.8L
Land Use/Land Cover	Bottomland hardwoods, riparian forests, and bottomland forested, scrub-shrub, emergent wetlands
Known Dispersed Recreation Opportunities	Limited hunting
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Address dispersed recreation impacts
Potential Partners	None identified

Parcel 517 – (77.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located at the confluence of three streams: West Branch Ruff Creek, North Branch Ruff Creek, and Jonathan Creek. This parcel features deciduous forest and scattered scrub-shrub and fringe emergent wetlands along the shoreline. Access is by boat with no obvious access from roads coming into parcel. However, there is some ATV occurring on the parcel. This parcel, locally known as Cedar Knob, receives substantial hunting. A dispersed recreation inventory was conducted in 2006. The analysis identified one site along the shoreline having moderate impacts and was considered a candidate for management actions. No federally or state-listed species are known to occur on the parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-517. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	28
Stream Mile and Bank	Jonathan Creek Mile 2.8L
Land Use/Land Cover	Deciduous forests and scattered scrub-shrub, fringe emergent wetlands
Known Dispersed Recreation Opportunities	Limited hunting
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Assess and monitor for all terrain vehicle impacts
Potential Partners	None identified

Parcel 518 – (26.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of North Branch Ruff Creek, a tributary to Jonathan Creek. This area is under a term easement (Tract No. XTGIR-140RE) to Marshall County, Kentucky for public recreation. The parcel is known as Wesley Village Park, and facilities include a trail, fishing pier, picnic tables, and a picnic pavilion. The undeveloped portion of this parcel has a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-518. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	28
Stream Mile and Bank	North Branch Ruff Creek Mile 0.7R Jonathan Creek Mile 2.8L

Parcel 519 – (86.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of four noncontiguous tracts of land and is located along both banks of North Branch Ruff Creek, a tributary to Jonathan Creek. The parcel extends among TVA markers 29–40 to 28–229; 28–225 to 25–32; 25–31 to 25–30; and 25–29 to 28–94. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. TVA–developed Ruff Creek Cabin Sites Subdivision and New Heights Subdivision are located on a portion of the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-519. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	25, 28, and 29
Stream Mile and Bank	North Branch Ruff Creek Miles 0.2–1.2B
Land Use/Land Cover	deciduous forest, maintained lawns, and historic hardwood tree plantings
Fronts Former TVA Tract (s)	XGIR–9, XGIR–15, XGIR–135, XGIR–136, and XGIR–137
Structure Profile	Varies
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 520 – (45.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of a two tracts of land located along both banks of North Branch Ruff Creek, a tributary to Jonathan Creek. This parcel features bottomland hardwoods; loblolly pine plantations; and bottomland forested, scrub-shrub, and fringe emergent wetlands. Historically, embankment plantings were established on portions of this parcel to protect relocated roadway embankments from erosion. Access is by Village Road that parallels and bisects a portion of the parcel. This area receives small and big game hunting. No federally or state-listed species are known to occur on this parcel. There is a moderate probability for the presence of cultural

resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-520. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	25
Stream Mile and Bank	North Branch Ruff Creek Mile 1.2B
Land Use/Land Cover	Historic hardwood tree plantings; bottomland hardwoods; loblolly pine plantations; and bottomland forested, scrub-shrub, and fringe emergent wetlands
Known Dispersed Recreation Opportunities	Limited hunting
Current Agreements/Commitments	Revocable license to West Kentucky Rural Electric Cooperative for electric utilities
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Embankment planting research
Potential Partners	None identified

Parcel 521 – (27.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Jonathan Creek and is bisected by US Route 68. The portion of the parcel situated upstream of US Route 68 is under an easement (Tract No. XTGIR-138RE) to KDFWR for public recreation. A boat ramp and parking area have been developed on this portion of the parcel. The portion of the parcel situated downstream of US Route 68 is under an easement (Tract No. XTGIR-873RE) to Lakeside Landing Campground and Marina for commercial recreation. Facilities at this commercial recreation area include a marina, campground, swimming pool, and picnic pavilion. The undeveloped portion of this parcel has a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-521. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	28
Stream Mile and Bank	Jonathan Creek Mile 2.5L

Parcel 522 – (212.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of Jonathan Creek and features upland hardwoods and mixed pine woodlands. Access to the parcel is by boat and from Cross Road. A dispersed recreation inventory was conducted in 2006, and the analysis identified one site on the upstream portion of the parcel. This minimal site has informal road access, but the area did not qualify for management actions. Although much of the parcel is steep, some small and big game hunting does occur. No federally or state-listed species are known to occur on this parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-522. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	29 and 30
Stream Mile and Bank	Jonathan Creek Miles 0.2–1.8L
Land Use/Land Cover	Upland hardwoods and mixed pine plantations
Known Dispersed Recreation Opportunities	Hunting and camping
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Conduct comprehensive land condition assessment • Address access to known dispersed recreation sites from informal roads • Assess for all terrain vehicle use and/or abuse
Potential Partners	None identified

Parcel 523 – (346.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of the Tennessee River at the confluence with Jonathan Creek. This area is under a lease (Tract No. XTGIR-63L) to the Four Rivers Boy Scout Council for a group camp and has been designated as Camp Manchester Boy Scout Camp. Facilities include overnight accommodations, boat ramp, boat slips, and picnic pavilion. There is a high probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-523. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	26 and 29
Stream Mile and Bank	TRMs 36.3–38.2L

Parcel 524 – (39.0 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel consists of islands stretching between TRMs 36.1 and 37.6. This parcel features bottomland/riparian forest and forested, scrub– shrub, and fringe emergent wetlands. These wetlands also provide fish spawning and nursery habitat. Access to the parcel is by boat only; therefore, activity is limited to primarily waterfowl hunting. Some of the islands have been used by nesting colonial wading and/or water birds. In recent years, there have been significant nesting from double–crested cormorants. No federally or state-listed species are known to occur on the parcel. There is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-524. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	26
Stream Mile and Bank	TRMs 36.1–37.6L
Land Use/Land Cover	Riparian forest and forested, scrub-shrub, fringe emergent wetlands
Known Dispersed Recreation Opportunities	Waterfowl Hunting
Current Agreements/Commitments	• Revocable license to the Commonwealth of Kentucky for a wildlife management area
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline • Coordinate cultural resources management activities with KDFWR • Shoreline stabilization on main channel side of islands to protect island vegetation and sensitive cultural resources • Survey islands for colonial wading/water bird and double–crested cormorants nesting and possible impacts to island vegetation • Assess for shoreline stabilization needs associated with cultural resources
Potential Partners	KDFWR

Parcel 525 – (94.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of six noncontiguous tracts of land located along the left descending bank of the Tennessee River. This parcel features upland hardwoods and scattered pine interspersed throughout the parcel. Wetlands are present along West Fork Bee Creek and consist of forested, scrub-shrub, and emergent wetlands. These wetlands also provide fish spawning and nursery habitat. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Access to the parcel is by boat and from informal and formal roads. Unauthorized ATV use has historically occurred in this area. The parcel receives small and big game hunting with some waterfowl hunting also occurring. Camping may occur along the shoreline and near areas accessible by informal roads. An informal boat ramp is also present at the end of Hickory Park Lane. No federally or state-listed species are known to occur on this parcel. The level areas of this parcel have a moderate probability for the presence of cultural resources; the steep areas have a low probability for the

presence of cultural resources. There are existing facilities on this parcel that could be permissible under TVA's policies unless they are determined to be violations. However, requests for new private water use facilities would not be considered.

Table 4-525. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	22, 23, 25, and 26
Stream Mile and Bank	TRMs 34.8–36.7L
Land Use/Land Cover	Upland hardwoods, mixed pine plantations, and forested, scrub-shrub and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and camping
Current Agreements/Commitments	• Revocable license to the Commonwealth of Kentucky for a wildlife management area • Revocable license to West Kentucky Rural Electric Cooperative for electric utilities
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Assess for dispersed recreation • Address access to known dispersed recreation sites from informal roads
Potential Partners	Kentucky Department of Fish and Wildlife Resources

Parcel 526 – (190.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of six noncontiguous tracts of land and is located along the left descending bank of the Tennessee River. The six tracts of land extend from Parcel 528 to TVA marker 22–6; TVA markers 22–3 to Parcel 527; Parcel 527 to Parcel 525; Parcel 525 to Parcel 525; Parcel 525 to Parcel 525; TVA markers 25–18 to 26–26; TVA markers 26–25 to 26–24. This parcel lies entirely below the 375-feet msl, and the current land use is deciduous forest and maintained lawns. Cemetery Hill Subdivision and Crosswind Estates are located on a portion of the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-526. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	23, 25, and 26
Stream Mile and Bank	TRMs 35–36.3L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–132, XGIR–133, XGIR–134, XGIR–613, and XGIR–614
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 527 – (1.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of the West Fork Bee Creek, a tributary to the Tennessee River. This area is under a revocable license to Hickory Hill 5 Star Resort for commercial recreation. Facilities at this commercial operation include a marina, boat ramp, swimming beach, swimming pool, picnic area, rental cabins, and play courts. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-527. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	23
Stream Mile and Bank	TRM 34.8L

Parcel 528 – (9.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of West Fork Bee Creek, a tributary to the Tennessee River. The area is under a revocable license to Shawnee Bay Resort for commercial recreation. Facilities include a marina, boat ramp, swimming beach, picnic facilities, rental cabins, and play courts. The undeveloped portion of this parcel has a moderate probability for

the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-528. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	23
Stream Mile and Bank	TRM 34.5L

Parcel 529 – (104.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the left descending bank of TRM 34. The parcel is situation among parcels 528, 530, and 531. This parcel lies entirely below the 375-foot msl, and the current land use deciduous forest and maintained lawns. Kentucky Lake Subdivision is located on the backlying property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-529. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	22D and 23
Stream Mile and Bank	TRM 34L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–131, XGIR–609, XGIR–610, XGIR–611, XGIR–612, and XGIR–634
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 530 – (30.2 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel consists of a peninsula located along the left descending bank of the Tennessee River. This parcel features upland hardwoods and scattered mixed pine interspersed throughout the parcel. This parcel serves as a visual buffer from nearby shoreline development. Access to the parcel is by boat and from an informal road to McLoad Cemetery which allows for limited hunting and camping. No federally or state-listed species are known to occur on this parcel. There is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-530. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	23
Stream Mile and Bank	TRM 34.4L
Land Use/Land Cover	Upland hardwoods and mixed pine plantations
Known Dispersed Recreation Opportunities	Hunting and camping
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Assess for cultural resources management actions • Coordinate cultural resources management activities with KDFWR
Potential Partners	KDFWR

Parcel 531 – (2.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of the Tennessee River and east of Barge Island Road. The area is under a revocable license to Hester's Resort and Marina for commercial recreation. Facilities at this area include a marina, boat ramp, swimming beach, rental cabins, picnic area, and play courts. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-531. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	23
Stream Mile and Bank	TRM 33.5L

Parcel 532 – (7.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along left the descending bank of TRM 33.5. The parcel extends from Parcel 534 to TVA marker 22–22 and TVA marker 22–52 to Parcel 531. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-532. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	22
Stream Mile and Bank	TRM 33.5L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–130, XGIR–607, and XGIR–609
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None identified

Parcel 533 – (29.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of the Tennessee River and east of Barge Island Road. The area is under a revocable license to Southern Komfort Resort for commercial recreation. Facilities at this commercial recreation area include a marina, boat ramp, swimming beach, campground, rental cabins, and restaurant. The undeveloped portion of this parcel has a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-533. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	23
Stream Mile and Bank	TRM 33.2L

Parcel 534 – (19.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Bee Spring, a tributary to the Tennessee River. The parcel is under a revocable license to Bee Spring Lodge for commercial recreation. Facilities at this area include a boat ramp, campground, motel, rental cabins, and restaurant. The undeveloped portion of this parcel has a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-534. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	19
Stream Mile and Bank	TRM 33L

Parcel 535 – (30.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along left the descending bank of the TRM 32.9. The parcel extends between TVA markers 19–38 to Parcel 534. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-535. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	19 and 22
Stream Mile and Bank	TRM 32.9L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–130 and XGIR–605
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 536 – (101.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of the Tennessee River and on the east side of Birmingham Point. This parcel features upland hardwoods and scattered mixed pine. Access to the parcel is by boat and an unimproved road. Hunting and camping occur on the parcel. No federally or state-listed species are known to occur on this parcel. There is a high probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-536. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–SW
TVA D–Stage Map Numbers	23
Stream Mile and Bank	TRM 34.4L
Land Use/Land Cover	Upland hardwoods and mixed pine plantations

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Hunting and camping
Current Agreements/Commitments	Revocable license to West Kentucky Rural Electric Cooperative for electric utilities
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Conduct comprehensive land condition assessment • Assess for all terrain vehicle use and/or abuse • Protective measures for onsite cultural resources protection • Cultural resources inventory and survey
Potential Partners	None identified

Parcel 537 – (81.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of the Tennessee River near the confluence with Big Bear Creek. The parcel extends between TVA markers 19–34 to 19–45, and Barge Island Road provides primary access to the parcel. The parcel includes three developed recreation areas.

Barge Island Boat Ramp is located along the right descending bank of Big Bear Creek. This area is under a revocable license to Marshall County, Kentucky, for public recreation. Facilities at this area include a boat ramp and parking area.

Barge Island (Birmingham Point) Recreation Area is located at the confluence of Big Bear Creek and the Tennessee River. TVA originally developed this area; however, it is now under a lease (Tract No. XGIR-927L) to a commercial operator. Facilities include a campground, swimming beach, picnic facilities, and play courts.

The remainder of this parcel extends between TVA markers 19–43 to 19–45. The backlying property is former TVA property (Tract No. XGIR-819) and was sold via Section 4(k)(a) of the TVA Act to the Bear Creek Girl Scout Council. The backlying property is currently used as Kentuckiana Girl Scout Camp and future development is restricted to recreational purposes. The shoreline parcel is utilized for water-based activities such as swimming, boating, and fishing. The undeveloped portion of this parcel has a high probability for the presence of cultural

resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-537. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	19
Stream Mile and Bank	TRMs 31.2–32.1L

Parcel 538 – (14.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is a small island located near the mouth of Bear Creek and the Barge Island Recreation Area. This parcel features upland hardwoods and scattered mixed pine woodlands. During summer months, access to the parcel is by boat; however, the parcel is connected to the mainland during winter months. The shoreline appears to be relatively steep which limits shoreline dispersed recreation use. The parcel may receive some use from the nearby commercial campground for hiking and nature viewing. No federally or state-listed species are known to occur on this parcel. There is a high probability for the presence of cultural resources. Birmingham Cemetery is located on the parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-538. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	16
Stream Mile and Bank	TRM 31.1L
Land Use/Land Cover	Upland hardwoods and mixed pine woodlands
Known Dispersed Recreation Opportunities	Hiking and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Protective measures for onsite cultural resources protection • Conduct cultural resources inventory and survey
Potential Partners	None identified

Parcel 539 – (21.0 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Big Bear Creek. The tract extends between TVA markers 19–42 to 19–34. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawn. One water use facility has been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-539. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	19
Stream Mile and Bank	Big Bear Creek Miles 0.4–0.7R
Land Use/Land Cover	Deciduous forest and maintained lawn
Fronts Former TVA Tract (s)	XGIR–822
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approved water use facility

Parcel 540 – (299.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Big Bear Creek, a tributary to the Tennessee River. This area is under easements (Tract No. XTGIR-78E and Tract No. XTGIR-78RE) to the Commonwealth of Kentucky for public recreation. This area is known as Camp John Currie and includes a museum, nature center, fishing pier, overnight accommodations, and swimming pool. Midland softshell turtle hatchlings, a state-listed species of concern, were recorded on this parcel in 1984. The undeveloped portion of this parcel has a high probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-540. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	19
Stream Mile and Bank	Big Bear Creek Miles 0.7–2.3R

Parcel 541 – (25.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along right the descending bank of Big Bear Creek. The parcel extends between TVA markers 22–65 to 22–28. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. However, water use facilities could be limited to in size and nature due to the proximity of a large wetland. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-541. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW and 17–SW
TVA D–Stage Map Numbers	22
Stream Mile and Bank	Big Bear Creek Mile 2.4R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–589 and XGIR–590
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 542 – (79.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of three noncontiguous tracts of land located along both banks of Big Bear Creek. This parcel features forested, scrub-shrub and emergent wetlands of high quality and function. These wetlands also provide fish spawning and nursery habitat. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian

habitat functions. Access to the parcel is by boat and road access is limited. Bear Creek Rookery State Natural Area, which supported a large nesting colony of great blue herons, is located on the western portion of this parcel. There is a memorandum of agreement with Kentucky Nature Preserves Commission for the registration and recognition of this state natural area. The parcel receives extensive hunting. No federally or state-listed species are known to occur on this parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-542. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW and 17–SW
TVA D–Stage Map Numbers	22
Stream Mile and Bank	Big Bear Creek Miles 2.8–3B
Land Use/Land Cover	Forested, scrub-shrub and emergent wetlands of high quality and function
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	• Revocable license to the Commonwealth of Kentucky for a wildlife management area • Memorandum of agreement between TVA and the Kentucky Nature Preserves Commission regarding the state natural area
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Wetlands management • Assess and inventory the Bear Creek Rookery wading bird nesting colony • Implement natural areas management plan
Potential Partners	• Kentucky Department of Fish and Wildlife Resources • Kentucky Nature Preserves Commission

Parcel 543 – (44.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three noncontiguous tracts of land and is located along both banks of Big Bear Creek, a tributary to the Tennessee River. The parcel extends among TVA markers 22–46 to 22–68; 22–61 to 22–62; and 22–63 to 22–64. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. However, water use facilities will be limited to in size and nature due to the proximity of a large wetland. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-543. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW and17–SW
TVA D–Stage Map Numbers	22–D
Stream Mile and Bank	Big Bear Creek Mile 2.8B
Land Use/Land Cover	Deciduous forest and wetlands
Fronts Former TVA Tract (s)	XGIR–587
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 544 – (63.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along left the descending bank of Big Bear Creek. The parcel extends from Parcel 545 to TVA marker 22–70. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. However, water use facilities will be limited to in size and nature due to the proximity of a large wetland. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-544. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	18 and 22
Stream Mile and Bank	Big Bear Creek Miles 2–2.9L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–128, XGIR–129, and XGIR–569
Structure Profile	Varies
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to the Commonwealth of Kentucky for a wildlife management area

Parcel 545 – (3.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of King Creek, a tributary to Big Bear Creek. The parcel is under a revocable license to King Creek Resort for commercial recreation. Facilities at the resort include a marina, boat ramp, swimming beach, campground, rental cabins, and play courts. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-545. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	18
Stream Mile and Bank	Big Bear Creek Mile 2L King Creek Mile 0.3R

Parcel 546 – (30.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along right the descending bank of King Creek and left descending bank of Big Bear Creek. The parcel extends between TVA markers 18–43 to Parcel 545. This parcel lies entirely below the 375-foot msl, and the current land cover is deciduous forest. One water use facility has been permitted and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-546. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	18
Stream Mile and Bank	King Creek Miles 0.3–0.6R Big Bear Creek Mile 2L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XGIR–586
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	Approved water use facility

Parcel 547 – (78.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of four noncontiguous tracts of land located along both banks of King Creek and Malcolm Creek. This parcel features bottomland forested, scrub-shrub, and emergent fringe wetlands of high quality and function. There is also some perennial hay present. This parcel serves as a visual buffer from nearby shoreline development in addition to providing numerous riparian habitat functions. Access to the parcel is by boat and from Ken Wood Road. Hunting, camping, and wildlife observation occur throughout this parcel. There is a historical record for a Great blue heron (*Ardea herodias*) nesting colony in the Malcolm Creek area. No other federally or state-listed species are known to occur on this parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-547. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	18
Stream Mile and Bank	King Creek Miles 0.3–0.6R Big Bear Creek Mile 2L
Land Use/Land Cover	Forested, scrub-shrub and emergent wetlands of high quality and function
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Term agricultural license for perennial hay

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries. • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Conduct comprehensive land condition assessment • Assess historic colonial wading bird nesting colony
Potential Partners	• Kentucky Department of Fish and Wildlife Resources • KY Nature Preserves Commission

Parcel 548 – (55.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of three noncontiguous tracts of land and is located along the right descending bank of Malcolm Creek and left descending bank of King Creek. The parcel extends among TVA markers 18–11 to Parcel 550; 19–25 to 19–26, and 19–26 to 18–44. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. TVA-developed Malcolm Creek Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-548. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	18
Stream Mile and Bank	Big Bear Creek Mile 2L King Creek Miles 0–0.8L Malcolm Creek Miles 0.2–0.7R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–124, XGIR–588, and XGIR–568
Structure Profile	Varies
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 549 – (6.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Big Bear Creek, a tributary to the Tennessee River. Big Bear Highway provides access to the property. This area is under an easement (Tract No. XTGIR-130WA) to Marshall County, Kentucky, for public recreation. This area is known as Bear Creek Day Use Park, and amenities include a boat ramp, picnic pavilions, picnic area, fishing pier, restrooms, and play courts. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-549. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	18
Stream Mile and Bank	Big Bear Creek Mile 1.6L

Parcel 550 – (17.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Big Bear Creek at the confluence of Malcolm Creek. The backlying property is former TVA property (Tract Nos. XGIR-125 and XGIR-636) and was sold via Section 4(k)(a) of the TVA Act for commercial recreation purposes. The backlying property is managed as a part of Big Bear Resort, and future development of this parcel is restricted to recreational purposes. Resort facilities include a marina, boat ramp, swimming beach, fishing pier, campground, rental cabins, swimming pool, and play courts. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-550. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	18
Stream Mile and Bank	Big Bear Creek Miles 1.3–1.6L

Parcel 551 – (7.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Malcolm Creek, a tributary to Big Bear Creek. The upstream portion of the parcel is under a revocable license to Malcolm Creek Resort for commercial recreation. Resort facilities include a marina, boat ramp, swimming beach, campground, rental cabins, and swimming pool. The downstream portion of the parcel is under a revocable license to Whispering Oaks Resort for commercial recreation. Facilities at this resort include a marina, boat ramp, beach, picnic pavilion, rental cabins, and play courts. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-551. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	18
Stream Mile and Bank	Malcolm Creek Mile 0.8L

Parcel 552 – (27.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Malcolm Creek, a tributary to Big Bear Creek. The tract extends among TVA markers 18–45 to Parcel 551. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest, maintained lawns, and perennial hay. Holland Acres Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Records of a colonial wading bird colony within in this parcel included records of the great egret (*Ardea alba),* a state endangered species. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-552. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	18

Location Component and Public Involvement Opportunities	Parcel Specific Information
Stream Mile and Bank	Malcolm Creek Mile 0.8R
Land Use/Land Cover	Deciduous forest, maintained lawns, and perennial hay
Fronts Former TVA Tract (s)	XGIR–584 and XGIR–585
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Term agricultural license for perennial hay • Revocable license to West Kentucky Rural Electric Cooperative for electric utilities

Parcel 553 – (25.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land and is located along the right descending bank of Malcolm Creek. The parcel extends among TVA markers 18–51 to 18–50 and 18–49 to 18–48. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest, maintained lawns, and perennial hay. Holland Acres Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-553. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	18–D
Stream Mile and Bank	Malcolm Creek 1.2R
Land Use/Land Cover	Deciduous forest, maintained lawns, and perennial hay
Fronts Former TVA Tract (s)	XGIR–583, XGIR–584, and XGIR–585
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Approvals for private water use facilities • Term agricultural license for perennial hay • Revocable license to West Kentucky Rural Electric Cooperative for electric utilities

Parcel XGIR-584 – (53.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Big Bear Creek. The parcel extends between TVA markers 16–41 to 18–52. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. TVA-developed Birmingham and Brien subdivisions are located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-554. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	16 and 18
Stream Mile and Bank	Big Bear Creek Miles 0.4–1R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–121, XGIR–122, XGIR–567, and XGIR–587
Structure Profile	Varies
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 555 – (85.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of Buckhorn Creek. This area features upland hardwoods, mixed pine, bottomland hardwoods, and shoreline fringe wetlands. Access to the parcel is by boat. A dispersed recreation inventory was conducted in 2006, and the analysis identified two dispersed recreation sites on the parcel. However, the sites contain minimal impacts, and no management actions were proposed. Hunting, camping, and wildlife observation occur on this relatively large area. From 1993 to 1995, forestry management activities were conducted on this parcel including a shelterwood and a small regeneration harvest. No federally or state-listed species are known to occur on this parcel. There is a moderate probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-555. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	16
Stream Mile and Bank	Bear Creek Mile 0.5L
Land Use/Land Cover	Bottomland hardwoods, shoreline fringe wetlands, and upland hardwoods
Known Dispersed Recreation Opportunities	Hunting, camping, and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Conduct comprehensive land condition assessment • Follow-up on previous forestry actions to determine outcomes and success • Conduct follow up assessments on known dispersed recreation sites
Potential Partners	None identified

Parcel 556 – (27.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the Buckhorn Bay inlet of Big Bear Creek. The parcel is under an easement (Tract No. XTGIR-143RE) to Marshall County, Kentucky for public recreation. Buckhorn Bay Day Use Area is present on the parcel, and facilities include a boat ramp, fishing pier, picnic pavilion, picnic area, and restrooms. The undeveloped portion of this parcel has a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-556. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	16
Stream Mile and Bank	Big Bear Creek Mile 0.5L

Parcel 557 – (19.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the Buckhorn Bay inlet of Big Bear Creek. The parcel extends among from TVA marker 16–44 to Parcel 558. The parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. A portion of Mor–Land Subdivision is located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-557. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	16
Stream Mile and Bank	Big Bear Creek Mile 0.5L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–104
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	• Revocable license to South Central Bell for telephone lines • Revocable license to Meriwether–Lewis Electric Cooperative for electric utilities • Revocable license to West Kentucky Rural Electric Cooperative for electric utilities • Approvals for private water use facilities

Parcel 558 – (24.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located at the confluence of Big Bear Creek and the Tennessee River. The parcel is under an easement (Tract No. XGIR-879RE) to Moor's Resort for commercial recreation. The resort includes a marina, boat ramp, swimming beach, campground, motel, rental cabins, restaurant, swimming pool, play courts, and a golf course. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-558. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	16
Stream Mile and Bank	TRM 30.9L

Parcel 559 – (185.9 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Tennessee River between TRM 27 and 30.5. This parcel also includes most of the right descending bank of Little Bear Creek. The parcel extends between TVA markers 13–63 to Parcel 558. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest, wetlands, and maintained lawns. Cambridge Shores Subdivision, Buena Vista Estates, Sherwood Shores Subdivision, a portion of Mor–Land Subdivision and TVA–developed Marshall Subdivision are located on the backlying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-559. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	6–NE and 17–NW
TVA D–Stage Map Numbers	10, 13, 14, and 16
Stream Mile and Bank	TRMs 27–30.5L Little Bear Creek Miles 0–2R
Land Use/Land Cover	Deciduous forest, maintained lawns, and wetlands
Fronts Former TVA Tract (s)	XGIR–99, XGIR–100, XGIR–101, XGIR–102, XGIR–103, and XGIR–104
Structure Profile	Varies
Current Agreements/Commitments	• Permanent easement to Marshall County, Kentucky, for a roadway • Approvals for private water use facilities

Parcel 560 – (1.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel is an island located north of Cambridge Shores Subdivision. This parcel features upland hardwoods and scattered mixed pine woodlands, and access to the parcel is by boat only. The shoreline appears to be relatively steep which limits shoreline recreation use and minimizes use by campers. No federally or state-listed species are known to occur on this parcel. The island parcel could be used by colonial nesting wading and/or water birds. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-560. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW
TVA D–Stage Map Numbers	14
Stream Mile and Bank	TRM 27.9L
Land Use/Land Cover	Upland hardwoods and mixed pine woodlands
Known Dispersed Recreation Opportunities	Limited camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along parcel boundaries and shoreline if deemed necessary • Assess for shoreline erosion issues • Survey island for nesting wading/water bird use
Potential Partners	None identified

Parcel 561 – (201.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along both descending banks of Little Bear Creek. The parcel features upland hardwoods; pines; and bottomland forested, scrub-shrub, and fringe emergent wetlands of high quality and function. These wetlands also provide fish spawning and nursery habitat. There are also associated mud flats during winter months. Access to the parcel is by boat and the back-lying private property. ATV's are accessing parcel from back lying property and informal roads and trails. Hunting, hiking, and wildlife observation occurs on the parcel. No federally or state-listed endangered, threatened or special status species are known to occur on

this parcel. There is a moderate probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-561. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	6–NE
TVA D–Stage Map Numbers	13
Stream Mile and Bank	Bear Creek Miles 1.3–2.3B
Land Use/Land Cover	Mudflats, upland hardwoods and pines, and bottomland forested wetlands, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting, wildlife observation, and hiking
Current Agreements/Commitments	None identified
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Conduct comprehensive land condition assessment • Address all terrain vehicle use/abuse • Address informal trail system • Conduct cultural resources survey
Potential Partners	Kentucky Department of Fish and Wildlife Resources

Parcel 562 – (97.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Little Bear Creek and left descending bank of TRM 26.9. The tract extends among TVA markers 16 to Parcel 563 and 13–49A to Parcel 563. TVA–developed Little Bear Creek Subdivision and Running Bear Subdivision are located on the backlying private property. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-562. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	6–NE and 17–NW
TVA D–Stage Map Numbers	10 and 13
Stream Mile and Bank	Little Bear Creek Miles 0–1.3L TRMs 26.3–26.8L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–3, XGIR–92, XGIR–95, and XGIR–96
Structure Profile	Varies
Current Agreements/Commitments	• Approvals for private water use facilities • Revocable license to a private individual for recreational use

Parcel 563 – (1.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located at the confluence of Little Bear Creek and the Tennessee River. The parcel is under a revocable license to Marshall, County, Kentucky, for public recreation. This park is known as Little Bear Creek Ramp and includes a boat ramp, fishing pier, picnic pavilion, and overlook area. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-563. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	10
Stream Mile and Bank	TRM 26.7L

Parcel 564 – (940.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is located along the right descending bank of Sled Creek. This parcel features a mixture of perennial hay land and upland hardwoods. The area also contains bottomland forested wetlands and shoreline fringe, scrub-shrub, and emergent wetlands. These wetlands also provide fish spawning and nursery habitat. Access to the parcel is by boat, back-lying property, and a nearby public boat ramp. Three term agricultural licenses for perennial hay are present, and the area could be a featured native grassland wildlife habitat. A portion of the

parcel will be converted to native warm season grasses for wildlife benefits. No federally or state-listed species are known to occur on this parcel. One bald eagle nest was recorded on this parcel and it is not known to be active at this time; however inactivity does not mean the nest is permanently inactive. There is a high probability for the presence of cultural resources, but only a portion has been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-564. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	17–NW and 6–NE
TVA D–Stage Map Numbers	6,9, and 10
Stream Mile and Bank	TRMs 25–26.5L
Land Use/Land Cover	Upland hardwoods, perennial hay/grasslands, and bottomland forested, shoreline fringe, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	Term agricultural license for perennial hay
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Address dispersed site impacts for potential needs • Large scale native warm season grasses and wildlife habitat demonstration with agricultural partners • Complete cultural resources survey
Potential Partners	Kentucky Department of Fish and Wildlife Resources

---

Parcel 565 – (26.6 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts located along the right descending bank of Sled Creek and left descending bank of TRM 25.7. The two tracts extend among TVA markers 9–22 to 9–25 and 24 to 23. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and open pasture. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-565. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	6–NE
TVA D–Stage Map Numbers	9 and 10
Stream Mile and Bank	Sled Creek Mile 0.4R TRM 25.7L
Land Use/Land Cover	Deciduous forest and pasture
Fronts Former TVA Tract (s)	XGIR–90 and XGIR–91
Structure Profile	Elevation 381–foot mean sea level
Current Agreements/Commitments	None identified

Parcel 566 – (24.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Sled Creek, a tributary to the Tennessee River. A portion of this parcel is under a revocable license to KDFWR for public recreation. A boat ramp and parking area have been developed by KDFWR in partnership with TVA. The parcel includes additional land to accommodate future expansion of public recreation facilities. The undeveloped portion of this parcel has a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-566. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	9
Stream Mile and Bank	Sled Creek Mile 1.5L TRM 25L

Parcel 567 – (79.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank between TRMs 24 and 25. This parcel extends between TVA marker SC–4 to Parcel 564. This parcel lies entirely below the 375-foot msl, and the current land use is deciduous forest and maintained lawns. TVA–developed Sled Creek Subdivision is located on the backlying private property. Water use facilities have been

constructed along the shoreline, and future requests for private water use facilities would be considered. Potential impacts to wetlands or other resources and any resulting mitigation from proposed water use facilities would be evaluated during a site-specific environmental review.

Table 4-567. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	6–NE
TVA D–Stage Map Numbers	6
Stream Mile and Bank	TRMs 24 –25L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XGIR–783
Structure Profile	Varies
Current Agreements/Commitments	Approvals for private water use facilities

Parcel 568 – (157.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of the Tennessee River. The parcel extends between the left abutments of Kentucky Dam to TVA marker SC–4. The backlying property is former TVA property (Tract No. XTGIR-56) and was transferred to the Commonwealth of Kentucky for public recreation. This parcel is also under an easement (also Tract No. XTGIR-56) to the Commonwealth of Kentucky for public recreation. The backlying property along with this parcel is collectively managed as Kentucky Dam Village State Park. Facilities in this part of the park include a marina, boat ramp, swimming beaches, motel, rental cottages, swimming pool, restaurant, play courts, golf course, riding stables, trails, picnic areas, and pavilions. The shoreline parcel is utilized for water-based activities such as swimming, boating, and fishing. The undeveloped portion of this parcel has a moderate probability for the presence of cultural resources, but the area has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-568. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	5
Stream Mile and Bank	TRMs 22.6–23.7L

Parcel 569 – (146.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is comprised of two tracts of land located along the left descending bank of the Tennessee River and *below* Kentucky Dam.

The western portion of the parcel is under a lease (Tract No. XTGIR-73L) to the Commonwealth of Kentucky for public recreation. This area is managed as a part of Kentucky Dam Village State Park. Facilities in this part of the park include a campground, camp store, recreation pavilion, and playgrounds.

The eastern portion of this parcel is adjacent to the tailwaters of Kentucky Dam. This area is under a permanent easement agreement (Tract No. XTGIR-75E) to the Commonwealth of Kentucky. This area is considered part of Kentucky Dam Village State Park; however, the area is managed by KDFWR. Facilities on this portion of the parcel include a boat ramp and parking area. The undeveloped portion of this parcel has a high probability for the presence of cultural resources, but only portions of the area have been surveyed. Requests for use of TVA lands and associated water–based structures to support developed recreation purposes would be considered.

Table 4-569. Parcel Information

Location Component	Parcel Specific Information
County, State	Marshall, Kentucky
TVA D–Stage Map Numbers	3–1 and 4
Stream Mile and Bank	TRM 21.6L

Parcel 570 – (75.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of the Tennessee River and downstream of the Interstate 24 Bridge. This parcel features mostly bottomland hardwoods and bottomland forested wetlands with some perennial hay. Access to the parcel is by boat, adjoining private property, and transmission line corridors. Hunting and ATV use occurs on the parcel. One record of trepocarpus (*Trepocarpus aethusae),* A state-listed species of concern is located within this parcel. There is a moderate probability for the presence of cultural resources, but the

area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-570. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	5–SE
TVA D–Stage Map Numbers	3
Stream Mile and Bank	TRMs 19–19.3L
Land Use/Land Cover	Bottomland hardwoods, bottomland forested wetlands, and perennial hay/grassland
Known Dispersed Recreation Opportunities	Hunting and wildlife observation
Current Agreements/Commitments	Term agricultural license for perennial hay
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Address all terrain vehicle use and abuse
Potential Partners	None identified

Parcel 571 – (76.72 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

The proposed Tupelo–Cypress Swamp HPA and SWA are located along the left descending bank of the Tennessee River and downstream of Kentucky Dam. This area features a bottomland wetland/swamp. Tupelo gum is the dominate species with bald cypress trees scattered throughout. This area has standing water throughout the year except during drought conditions. Access to the parcel is by boat, from an adjacent road, and via transmission line corridors. Hunting and ATV use occurs on the parcel. Installation of a boardwalk and interpretive signage would facilitate low impact recreation while educating the public. Potential partnerships could be established with Kentucky State Nature Preserves Commission, Kentucky Nature Conservancy, Western Kentucky University, Murray State University, and other educational institutions. Within this parcel, there is one record of Carolina silverbell (*Halesia carolina*), a state-listed endangered species. There is a high probability for the presence of cultural resources, but the area has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-571. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	5–SE
TVA D–Stage Map Numbers	3
Stream Mile and Bank	TRMs 19–19.6L
Land Use/Land Cover	Bottomland hardwoods, bottomland forested wetlands, and tupelo gum/bald cypress swamp
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	Proposed registry agreement with Kentucky Nature Conservancy and Kentucky Nature Preserves Commission
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries and shoreline • Complete cultural resources survey • Complete biological inventory • Ecological education and research • Install a boardwalk with interpretive signage for public use • Address all terrain vehicle use and abuse
Potential Partners	• Kentucky State Nature Preserves Commission Kentucky Nature Conservancy • Western Kentucky University • Murray State University • University of Tennessee at Martin

Parcel 572 – (148.4 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

The TVA natural area Cypress Creek Slough HPA is located along Cypress Creek off Kentucky Reservoir shoreline proper. This area features a bottomland wetland and forested slough that is of high quality and function. This area has standing water throughout the year except during drought conditions. Access to the parcel is from adjacent roads and a transmission line corridor. Hunting and wildlife observation may occur on the parcel. There are known occurrences of several globally rare and state-listed species found here: Cypress knee sedge (*Carex decomposita*), Texas lilliput (*Toxoplasma texasensis*), Brown Creeper (*Certhia amaericana*), Bird–voiced treefrog (*Hyla avavoca*) and others. There is a high probability for the presence of cultural resources, but the area has not been surveyed.

Table 4-572. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Kentucky
Topographic Map (Sheet No. and Quadrant)	5–SE
TVA D–Stage Map Numbers	3
Stream Mile and Bank	TRMs 19–19.6L
Land Use/Land Cover	Bottomland hardwoods and forested wetlands
Known Dispersed Recreation Opportunities	Hunting, wildlife observation, and nature study
Current Agreements/Commitments	Registry agreement with Kentucky Nature Conservancy and Kentucky Nature Preserves Commission
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Placement of TVA property and public lands signs along parcel boundaries • Complete cultural resources survey • Complete biological inventory • Ecological education and research • Implement natural areas management plan
Potential Partners	• Kentucky State Nature Preserves Commission • Kentucky Nature Conservancy • Western Kentucky University • Murray State University • University of Tennessee at Martin

This page intentionally left blank

CHAPTER 5. PLANNING TEAM

J. Kenley Austin

Position:	Program Manager, Reservoir Land Use and Permitting
Education:	B.S., Biology and Geography
Experience:	12 years in Planning and Managing Land; 8 years in Natural Resource Management
Involvement:	Planning Team and Deed interpretation

Chellye L. Campbell

Position:	Senior Specialist, Land Policy
Education:	B.S., Biology
Experience:	14 years in Planning and Managing Land
Involvement:	Deed interpretation and Land Policy guidance

Jerry G. Fouse

Position:	Recreation Specialist
Education:	M.B.A.; B.S., Forestry and Wildlife
Experience:	38 years in Natural Resources – Recreation Planning and Economic Development
Involvement:	Planning Team and Recreation Management

Heather M. Hart

Position:	Natural Areas Specialist
Education:	M.S., Environmental Science and Soils; B.S., Plant and Soil Science
Experience:	9 years in Surface Water Quality and Soil and Groundwater Investigations; 7 years in Environmental Reviews
Involvement:	Planning Team

Wesley K. James

Position:	Natural Resource Specialist
Education:	B.S., Wildlife and Fisheries Science
Experience:	36 years in Terrestrial and Wildlife Management and Environmental Impacts Evaluation
Involvement:	Planning Team

Gary Jenkins

Position:	Natural Resource Specialist
Education:	B.S., Wildlife and Fisheries Science
Experience:	34 years in Aquatic and Terrestrial Habitat Assessments and Management
Involvement:	Planning Team

Thomas O. Maher

Position:	Senior Archaeologist
Education	Ph.D., Anthropology
Experience:	32 years in the field of Archaeology
Involvement:	Planning Team

Leonard L. McCurdy, Jr.

Position:	Senior Specialist, Reservoir Land Use and Permitting
Education:	B.S., Environmental Studies–Chemistry; J.D., Law
Experience:	25 years in the field of Law including 18 years in TVA real property rights
Involvement:	Deed interpretation and Land Policy guidance

Susan D. McDaniel

Position:	Process Integration Specialist
Experience:	30 years in Geographic Information Systems and Planning and Managing Land
Involvement:	Planning Team and preparation of geographic information system

Heather L. Montgomery

Position:	Senior Program Manager, Reservoir Lands Planning
Education:	B.S., Environmental Biology
Experience:	13 years in Planning and Managing Land and Environmental Impacts Evaluation
Involvement:	Program Manager

Karen A. Rylant

Position:	Senior Specialist, Section 26a Policy and Process
Education:	Ph.D., Agronomy (Soil Chemistry); M.S., Soil Fertility; B.A., Chemistry, B.A., Geology
Experience:	8 years in Environmental Research; 4 years in Land and Shoreline Management
Involvement:	Deed interpretation and Section 26a guidance

CHAPTER 6. LITERATURE CITED

Benson, A.J., D. Raikow, J. Larson, A. Fusaro, and A.K. Bogdanoff. 2016. Dreissena polymorpha. USGS Nonindigenous Aquatic Species Database, Gainesville, Florida. Retrieved from https://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=5 (accessed October 2016).

EDDMapS. 2016. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Retrieved from http://www.eddmaps.org/ (accessed October 2016).

Etnier, D. A. and W. C. Starnes. 1993. The Fishes of Tennessee. Knoxville: University of Tennessee Press.

Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. 19+ vols. New York and Oxford.

Hilty, John. 2015. Illinois Wildflowers. Retrieved from http://www.illinoiswildflowers.info/ (accessed July 2016).

Homer, C.G., J.A. Dewitz, L. Yang, S. Jin, P. Danielson, G/ Xian, J. Coulston, N.D. Herold, J.D. Wickham, and K. Megown. 2015. Completion of the 2011 National Land Cover Database for the conterminous United States-Representing a decade of land cover change information. Photogrammetric Engineering and Remote Sensing, v. 81, no. 5, p. 345-354.

Kansas Wildflowers and Grasses. 2016. Kansas Wildflowers and Grasses. Retrieved from http://www.kswildflower.org/flower_details.php?flowerID=331 (accessed August 2016).

Kerr, Jonathan P. 1996. Archaeological Survey of Kentucky Lake, Western Tennessee and Kentucky. Report on file at the Tennessee Valley Authority Cultural Resources Library, Knoxville, Tennessee.

Kerr, Jonathan P. and Matthew D. Reynolds 2000. Archaeological Survey of Shoreline Management Initiative Fee-Owned Shoreline along the Margins of Kentucky Lake, Western Tennessee and Kentucky. Report on file at the Tennessee Valley Authority Cultural Resources Library, Knoxville, Tennessee.

KY-EPPC. 2013. Kentucky Exotic Pest Plant Council. Exotic Invasive Plants of Kentucky 2013 (Third Edition). Retrieved from http://www.se-eppc.org/ky/KYEPPC_2013list.pdf (accessed August 2016).

Ladybird Johnson Wildflower Center. 2013. Native Plant Information Network, NPIN. Lady Bird Johnson Wildflower Center at The University of Texas, Austin, Texas. Retrieved from http://www.wildflower.org/plants/ (accessed July 2016).

McDonough, T. A. and G. D. Hickman. 1999. "Reservoir Fish Assemblage Index Development - A Tool for Assessing Ecological Health in Tennessee Valley Authority Impoundment," in Assessing the Sustainability and Biological Integrity of Water Resources Using Fish Communities, 523-540. Edited by T. Simon. Washington, D.C.: CRC Press.

Moore, Clarence B. 1915. Aboriginal Sites on the Tennessee River. Journal of the Academy of Natural Sciences of Philadelphia, second series 16(3).

NatureServe. 2016. NatureServe Web Service. Arlington, Virginia. U.S.A. Retrieved from http://services.natureserve.org (accessed July 2016).

Rafinesque, Constantine Samuel. 1824. Ancient History or Annals of Kentucky. Frankfort.

SE-EPPC. 2016. Southeast Exotic Pest Council. Invasive Plants of the Southeast. Retrieved from http://www.se-eppc.org/weeds.cfm (accessed August 2016).

TDEC. 2014. Tennessee Department of Environmental and Conservation Rare Species Dataviewer. Retrieved from https://tn.gov/environment/article/tdec-dataviewers (accessed July 2016).

———. 2016. 2016 Draft 303(d) List. Retrieved from: http://www.tennessee.gov/environment/article/wr-wq-water-quality-reports-publications (accessed August 2016).

TN-EPPC. 2016. Tennessee Exotic Pest Plant Council. Retrieved from http://www.tneppc.org/invasive_plants (accessed August 2016).

————. 1994. Final Environmental Impact Statement on the Natural Resources Management Plan at Land Between the Lakes. Volumes 1, 2, and 3.

————. 1998. Shoreline Management Initiative: An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley Final Environmental Impact Statement. Available at https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy.

————. 2000. Harmon Creek Management Unit – Kentucky Reservoir, Management Plan and Final Environmental Assessment.

————. 2002. Bear Creek Management Unit – Kentucky Reservoir, Management Plan and Final Environmental Assessment.

————. 2004. Reservoir Operations Study Final Programmatic Environmental Impact Statement. Prepared in cooperation with the U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service. Available at https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Reservoir-Operations-Study.

————. 2005. Tennessee Valley Authority Recreation Strategic Plan: A Framework for Providing Recreation Opportunities On and Along the Tennessee River 2004-2005.

————. 2011. Natural Resource Plan and associated Natural Resource Plan Final Environmental Impact Statement, Volumes 1 and 2. Available at

https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan.

———. 2016a. Tennessee Valley Authority Natural Heritage Database, Data Received 2016.

———. 2016b. Reservoir Health Ratings. Retrieved from https://www.tva.gov/Environment/Environmental-Stewardship/Water-Quality/Reservoir-Health-Ratings (accessed July 2016).

———. 2016c. Tennessee Valley Authority Reservoir Vital Signs Monitoring Program Fish Collections, Data Received 2016.

Tennessee Wildlife Resources Agency. 2016. Tennessee Watchable Wildlife. Nashville, Tennessee. Retrieved from http://www.tnwatchablewildlife.org/ (accessed July 2016).

University of Illinois. 2016. University of Illinois Extension. Retrieved from http://extension.illinois.edu/hortanswers/plantdetail.cfm?PlantID=908&PlantTypeID=14 (accessed August 2016).

U.S. Census Bureau. 2010a. 2010 Census, USCB Population Division. Annual Estimates of the Resident Population: April 2010-July 1, 2015, UT Center for Business and Economic Research, 2003.

———. 2010b. American Fact Finder 2010-2014 American Community Survey, 5-year estimates Retrieved from http://factfinder.census.gov/ (accessed July 2016).

———. 2015. Annual Estimates of the Resident Population: April 1, 2010-July 1, 2015. Retrieved from http://factfinder.census.gov/ (accessed July 2016).

USDA NRCS. 2016a. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Available online at http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed July 2016.

———. 2016b. Natural Resources Conservation Service, United States Department of Agriculture. The PLANTS Database National Plant Data Team, Greensboro, North Carolina 27401-4901 USA. Retrieved from http://plants.usda.gov (accessed July 2016).

U.S. Department of the Interior. 2008. Reclamation: Managing Water in the West; Resource Management Plan, Navajo Reservoir Area, Colorado and New Mexico, Final Environmental Assessment and Finding of No Significant Impact, June 2008.

U.S. Environmental Protection Agency. 2016. Green Book Nonattainment/Maintenance Status for Each County. Retrieved from www3.epa.gov/airquality/greenbook (accessed June 2016).

———. 2016. Initial Designations for States and Territories – Area Designations for the 2012 Annual Fine Particle (PM2.5) Standard. Retrieved from www.3.epa.gov/pmdesignations/2012standards/state.htm (accessed August 2016).

————. 2013. Level III Ecoregions of the Continental United States: Corvallis, Oregon, U.S. EPA– National Health and Environmental Effects Research Laboratory, map scale 1:7,500,000. Retrieved from http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwjv7JnGxuTPAhWZ14MKHbGfAZQQFggeMAA&url=http%3A%2F%2Fpubs.usgs.gov%2Ftm%2F04%2Fc03%2Fvirtual_CD%2Fuseco.pdf&usg=AFQjCNFOhu4HNWA5olNUctydUYH9jCmkhQ (accessed July 2016).

U.S. Fish and Wildlife Service. 2016a. IPaC Trust Resources Report. Information, Planning and Conservation System. Retrieved from https://ecos.fws.gov/ipac/ (accessed October 2016).

U.S. Fish and Wildlife Service. 2016b. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Retrieved from http://www.fws.gov/wetlands (accessed July 2016).

USGS. 2016. U. S. Geological Survey. Land Cover Trends Project. Retrieved from http://landcovertrends.usgs.gov/main/ecoIndex.html (accessed July 2016).

Webb, William S. And W.D. Funkhouser 1932. Archaeological Survey of Kentucky. The University of Kentucky Reports in Archaeology and Anthropology 2.

GLOSSARY

acre	A unit measure of land area equal to 43,560 square feet
agricultural licensing	Some parcels or portions of parcels designated for other purposes or uses may also be suitable for interim agricultural licensing. These parcels have been identified using the criteria contained in TVA's agriculture instruction. Normal tenure for a TVA agricultural license is five years. Land with extreme erosion potential may not be licensed for agricultural use unless erosion and sediment controls, including the use of best management practices, can be successfully implemented. Further investigation and/or mitigation of adverse impacts to natural or cultural resources may be required prior to approval of license agreements.
cultural resources	Archaeological, historic, and architectural resources
dam reservation	Lands generally maintained in a park–like setting by TVA to protect the integrity of the dam structure, hydroelectric facilities, and navigation locks. The reservation also provides for public visitor access to the TVA dam facilities and recreation opportunities, such as public boat access, bank fishing, camping, picnicking, etc. Hunting is not typically allowed on dam reservations.
deciduous	Vegetation that sheds leaves in autumn and produces new leaves in the spring.
dewatering unit	A small impoundment that is operated independently of the larger reservoir. Surface water is pumped from the dewatering unit to the reservoir during the summer months and vice versa during winter months.
dispersed recreation	Recreation of an informal nature such as hunting, hiking, biking, bird watching, photography, primitive camping, bank fishing, and picnicking that occur on TVA land. These activities are not associated with developed facilities although some improvements may occur for access, health and safety, or to protect the environment.
embayment	A bay or arm of the reservoir
emergent wetland	Wetlands dominated by erect, rooted herbaceous plants, such as cattails and bulrushes.
endangered species	A species in danger of extinction throughout all or a significant part of its range. Endangered species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.
Environmental Policy	A TVA Board–approved policy that communicates guiding principles to lead TVA successfully in the reduction of its environmental impact while continuing to provide reliable and competitively priced power to the Valley
floodplain	Any land area susceptible to inundation by water from any source by a flood of selected frequency. For purposes of the National Flood Insurance Program, the floodplain, as a minimum, is that area subject to one percent or greater chance of flooding (100–year flood) in any given year.
forest	Vegetation having tree crowns overlapping, generally forming 60 to100 percent cover.
Land Policy	A TVA Board–approved policy that guides retention, disposal, and planning interests in real property

mitigation	An action that either will result in avoidance or an effect or cause the results of an activity to be minor in significance
natural areas	Ecologically significant sites, lands set aside for particular management objectives, and lands that contain sensitive biological, cultural or scenic resources. The TVA natural area program includes small wild areas, habitat protection areas, wildlife observation areas, and ecological study areas.
plan tract	A numbered parcel of TVA fee–owned land that has been assigned, through the reservoir land planning process, an allocation to guide future land use decisions.
prime farmland	Generally regarded as the best land for farming, these areas are flat or gently rolling and are usually susceptible to little or no soil erosion. Prime farmland produces the most food, feed, fiber, forage, and oil seed crops with the least amount of fuel, fertilizer, and labor. It combines favorable soil quality, growing season, and moisture supply and, under careful management, can be farmed continuously and at a high level of productivity without degrading either the environment or the resource base. Prime farmland does not include land already in or committed to urban development, roads, or water storage.
riparian	Related to or located on the banks of a river or stream
scrub-shrub	Woody vegetation less than about 20 feet tall. Species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions
shoreland	The surface of land lying between the minimum pool elevation of a TVA reservoir and the maximum shoreline contour or TVA back–lying property (whichever is further)
shoreline	The line where the water of a TVA reservoir meets the shore when the water level is at the normal summer pool elevation.
shoreline access rights	TVA land encumbered with deeded or implied rights held by adjacent property owners. The deeded or implied rights allow individuals to construct water use facilities upon receipt of TVA's written approval of plans.
threatened species	A species threatened with extinction throughout all or a significant portion of its range or territory. Threatened species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.
wetlands	As defined in TVA Environmental Review Procedures, "Wetlands are those areas inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances do or would support a prevalence of vegetation or aquatic life that requires saturated or seasonably saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, mud flats, and natural ponds.
wildlife management area	Land and/or water areas designated by state wildlife agencies, such as the Tennessee Wildlife Resources Agency, for the protection and management of wildlife. These areas typically have specific hunting and trapping regulations as well as rules regarding appropriate uses of these areas by the public.

INDEX

Advisory Council on Historic Preservation 52
Alabama 7, 43
aquatic ecology ..... i, 23, 26
archaeological resource 53, 63, 72
area of potential effect ..... v, 52
back-lying land 80, 82
best management practice 495
Committed land 75
Comprehensive Valleywide Land Plan ..... v, 6, 71, 80, 81, 82
cultural resource 52, 53, 77, 81, 86, 87, 88, 89, 90, 91, 93, 94, 96, 97, 98, 101, 102, 104, 105, 106, 108, 109, 110, 111, 112, 113, 115, 116, 117, 119, 121, 122, 123, 125, 126, 127, 128, 130, 131, 132, 133, 134, 135, 136, 138, 139, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 152, 153, 154, 155, 158, 160, 161, 163, 164, 165, 166, 167, 168, 170, 171, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 226, 227, 228, 230, 231, 233, 234, 235, 236, 237, 238, 239, 240, 243, 244, 245, 247, 248, 249, 250, 251, 252, 253, 254, 256, 258, 260, 261, 262, 264, 265, 266, 268, 269, 271, 273, 274, 276, 277, 280, 282, 283, 284, 285, 286, 287, 288, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 302, 303, 305, 306, 307, 308, 309, 311, 312, 313, 314, 316, 317, 318, 319, 321, 323, 324, 327, 330, 331, 332, 333, 335, 336, 339, 340, 342, 343, 346, 349, 350, 351, 352, 353, 358, 359, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 373, 374, 375, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 403, 404, 405, 406, 407, 409, 410, 411, 412, 413, 414, 416, 417, 418, 420, 421, 423, 424, 425, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 441, 442, 443, 444, 445, 446, 448, 449, 450, 452, 453, 454, 455, 458, 459, 461, 462, 463, 464, 465, 467, 470, 475, 476, 479, 480, 482, 483, 484, 485, 486, 487, 488, 495
deeded access 82
developed recreation ... 6, 11, 12, 34, 42, 51, 56, 74, 77, 79, 80, 81, 82, 88, 94, 95, 97, 100, 110, 111, 113, 115, 119, 132, 133, 139, 144, 145, 146, 147, 153, 155, 164, 167, 170, 175, 176, 181, 182, 191, 192, 193, 198, 201, 202, 206, 215, 226, 235, 237, 240, 243, 248, 253, 254, 261, 263, 268, 275, 279, 282, 285, 286, 291, 293, 300, 301, 302, 307, 311, 314, 315, 316, 322, 323, 326, 334, 337, 338, 342, 350, 352, 357, 358, 359, 361, 363, 364, 368, 370, 375, 376, 378, 382, 388, 402, 404, 408, 409, 410, 411, 413, 424, 427, 428, 430, 432, 434, 435, 439, 445, 450, 452, 454, 457, 458, 460, 461, 463, 464, 465, 469, 472, 473, 476, 477, 481, 483, 484, 485
dissolved oxygen 47, 48
ecologically significant site 55, 496
endangered species ..... i, 26, 33, 77, 267, 331, 473, 486, 495, 496
environmental impact statement ..... v, 1, 257, 492
Executive Order ..... v, 21, 59, 63, 151
fish ..ii, v, 14, 23, 24, 26, 28, 43, 62, 152, 153, 172, 181, 372, 380, 405, 406, 409, 415, 416, 417, 418, 419, 420, 423, 438, 441, 442, 444, 446, 448, 454, 455, 456, 466, 467, 471, 479, 480, 481, 482, 492, 493, 494
flood 1, 8, 9, 10, 47, 49, 51, 53, 65, 66, 67, 71, 171, 495
floodplain 7, 10, 34, 38, 51, 150, 396, 420, 495
flowage easement 9, 10, 71
Great Falls 21

industrial... 6, 9, 10, 11, 26, 49, 51, 54, 55, 56, 68, 71, 73, 74, 76, 77, 79, 80, 81, 82, 87, 88, 109, 142, 143, 148, 149, 172, 173, 179, 203, 235, 236, 238, 239, 241, 269, 270, 350, 422
Kentucky . i, ii, iii, v, 1, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 34, 37, 40, 41, 42, 43, 47, 48, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 66, 68, 71, 76, 77, 78, 79, 80, 81, 82, 85, 86, 87, 88, 89, 91, 154, 162, 171, 180, 200, 221, 243, 292, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 491, 492, 494, 507, 517, 524
land use i, iii, 3, 6, 9, 11, 49, 53, 55, 56, 57, 71, 72, 75, 76, 77, 80, 81, 82, 83, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 183, 184, 185, 186, 187, 188, 189, 190, 192, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 292, 293, 294, 295, 296, 297, 298, 299, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 353, 354, 355, 356, 357, 358, 360, 361, 362, 363, 364, 365, 366, 367, 369, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 397, 398, 399, 400, 401, 402, 403, 405, 406, 407, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 455, 456, 457, 458, 459, 460, 462, 464, 465, 466, 467, 468, 469, 470, 471, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 486, 487, 488, 489, 490, 496, 507
maximum shoreline contour 496
mitigation.. 91, 92, 93, 95, 100, 102, 103, 104, 107, 110, 114, 115, 120, 121, 122, 123, 124, 125, 129, 131, 134, 136, 137, 140, 147, 149, 156, 157, 158, 166, 169, 183, 209, 212, 242, 245, 246, 248, 249, 255, 257, 259, 262, 269, 270, 274, 277, 278, 281, 286, 287, 289,292, 293, 295, 298, 300, 303, 304, 307, 309, 310, 312, 315, 318, 320, 322, 328, 329, 333, 338, 339, 341, 345, 348, 353, 355, 356, 358, 360, 362, 366, 367, 371, 374, 376, 383, 385, 387, 388, 390, 393, 395, 398, 399, 400, 402, 405, 406, 410, 411, 413, 415, 417, 419, 421, 426, 428, 430, 431, 433, 434, 436, 440, 441, 443, 445, 447, 448, 451, 456, 458, 460, 462, 465, 466, 468, 469, 471, 473, 474, 475, 477, 478, 480, 482, 484, 495, 496
mussel 26, 30, 45, 46, 180, 221, 294
National Environmental Policy Act (NEPA) ..... v, 26, 59, 71, 83
National Historic Preservation Act ..... v, 52, 53
National Park Service 55, 68
National Register of Historic Places ..... v, 52, 54, 72, 78, 86
natural area 55, 63, 72, 73, 74, 75, 77, 79, 197, 298, 299, 396, 397, 398, 467, 487, 488, 496
plant communities 22, 23
prime farmland ..... i, ii, 9, 10, 11, 114, 136, 153, 182, 202, 224, 252, 496

recreation ...i, ii, 5, 9, 10, 11, 12, 13, 15, 16, 50, 53, 55, 62, 68, 69, 72, 73, 74, 75, 76, 80, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 99, 100, 101, 102, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 121, 122, 124, 125,126, 128, 130, 131, 132, 133, 135, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 150, 151, 152, 153, 154, 155, 159, 160, 161, 162, 163, 164, 165, 166, 168, 169, 170, 171, 172, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 240, 241, 243, 244, 245, 247, 248, 250, 251, 252, 253, 254, 255, 256, 257, 258, 260, 262, 263, 264, 265, 266, 267, 271, 272, 273, 275, 276, 278, 279, 280, 282, 283, 284, 285, 288, 289, 290, 291, 293, 294, 295, 296, 297, 299, 300, 301, 302, 304, 305, 306, 307, 308, 310, 311, 312, 313, 314, 315, 316, 317, 319, 320, 321, 322, 323, 324, 325, 326, 327, 330, 331, 332, 334, 335, 336, 337, 339, 340, 342, 343, 344, 345, 347, 348, 349, 350, 351, 352, 354, 355, 357, 358, 359, 360, 361, 362, 363, 364, 365, 367, 368, 369, 370, 371, 372, 373, 375, 376, 377, 378, 379, 380, 381, 383, 384, 386, 388, 389, 391, 392, 394, 397, 400, 401, 402, 403, 404, 406, 407, 408, 409, 412, 413, 414, 415, 416, 418, 420, 421, 422, 423, 424, 425, 426, 427, 429, 430, 431, 433, 434, 435, 437, 438, 439, 442, 443, 444, 445, 446, 449, 450, 452, 453, 455, 456, 457, 459, 460, 461, 463, 464, 465, 467, 469, 470, 472, 473, 475, 476, 477, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 492, 495

Reservoir Land Management Plan 1, ii, iii, v, 1, 5, 6, 9, 11, 12, 16, 21, 26, 33, 41, 42, 47, 49, 50, 51, 52, 56, 57, 59, 71, 75, 77, 78, 79, 80, 81, 82, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 153, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487

Reservoir Operations Study 256, 257, 258, 492

residential development . 9, 55, 106, 119, 120, 184, 303, 313, 318, 319, 336, 366, 368, 370, 374, 401, 435

residential water use facilities 75

scoping 1

Section 106 of the National Historic Preservation Act 52

Section 26a of the TVA Act 10, 48, 71

sensitive resource 6, 11, 16, 34, 40, 42, 43, 56, 68, 72, 73, 75, 76, 77, 78, 80, 81, 83, 96, 108, 116, 121, 123, 127, 139, 143, 150, 153, 162, 168, 171, 173, 177, 180, 196, 205, 210, 213, 221, 237, 242, 251, 256, 264, 265, 273, 284, 288, 296, 298, 305, 306, 308, 313, 330, 332, 335, 346, 379, 396, 425, 433, 438, 440, 454, 459, 464, 486, 487
shoreline access .. 6, 10, 11, 34, 40, 41, 42, 43, 56, 71, 75, 76, 77, 80, 82, 92, 93, 94, 95, 98, 99, 100, 101, 103, 104, 106, 107, 111, 114, 118, 120, 123, 124, 125, 127, 129, 131, 132, 133, 136, 137, 140, 147, 156, 157, 158, 165, 169, 183, 208, 212, 241, 245, 246, 247, 249, 255, 257, 259, 261, 263, 268, 269, 270, 272, 273, 277, 278, 280, 281, 285, 287, 289, 291, 293, 295, 297, 300, 303, 304, 307, 309, 310, 312, 315, 318, 320, 322, 328, 329, 333, 337, 338, 339, 341, 345, 348, 353, 355, 356, 357, 360, 362, 366, 367, 369, 371, 373, 375, 383, 385, 386, 387, 388, 390, 393, 395, 398, 400, 402, 405, 406, 410, 411, 412, 414, 415, 417, 419, 420, 426, 428, 429, 431, 432, 434, 436, 440, 443, 445, 447, 448, 451, 456, 458, 460, 462, 465, 466, 468, 469, 471, 473, 474, 475, 477, 478, 480, 482, 483, 496
Shoreline Management Initiative ..... v, 3, 10, 50, 71, 491, 492
Shoreline Management Policy ..... i, v, 3, 75, 82
socioeconomics ..... i, 57
speciesii, 18, 19, 20, 21, 22, 23, 24, 26, 27, 33, 34, 37, 40, 41, 42, 43, 46, 47, 49, 62, 63, 67, 72, 73, 85, 89, 90, 93, 96, 97, 98, 101, 102, 104, 105, 106, 108, 109, 110, 112, 114, 116, 117, 119, 121, 122, 123, 125, 126, 127, 128, 130, 131, 134, 135, 136, 138, 139, 141, 142, 143, 144, 145, 148, 150, 152, 154, 158, 160, 161, 163, 165, 166, 167, 168, 171, 173, 174, 176, 177, 178, 180, 181, 182, 184, 185, 186, 187, 188, 189, 190, 192, 193, 194, 195, 196, 197, 199, 200, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 213, 214, 216, 217, 218, 219, 220, 221, 222, 223, 224, 226, 227, 228, 230, 231, 232, 234, 236, 237, 239, 240, 242, 243, 245, 247, 249, 250, 251, 252, 253, 255, 256, 258, 260, 262, 264, 265, 266, 271, 273, 274, 276, 277, 280, 282, 283, 284, 287, 288, 290, 292, 294, 296, 297, 298, 299, 301, 303, 305, 306, 308, 309, 311, 313, 314, 316, 317, 318, 319, 321, 324, 327, 330, 331, 333, 335, 336, 339, 340, 343, 346, 349, 351, 353, 359, 363, 365, 366, 368, 370, 373, 374, 377, 378, 379, 380, 381, 382, 384, 386, 389, 391, 392, 394, 396, 398, 399, 401, 403, 405, 407, 408, 412, 414, 416, 417, 418, 420, 421, 423, 425, 427, 429, 433, 435, 437, 438, 441, 442, 444, 446, 448, 449, 451, 453, 454, 455, 459, 462, 464, 465, 467, 470, 475, 479, 482, 485, 486, 487, 491, 492, 495, 496
State Historic Preservation Officer 53
tailwater 47
Tennessee 1, i, ii, v, vi, 1, 2, 7, 8, 9, 10, 12, 13, 14, 15, 17, 21, 22, 38, 39, 43, 44, 45, 46, 47, 51, 53, 55, 58, 59, 60, 61, 62, 63, 65, 66, 68, 80, 81, 88, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 379, 380, 381, 386, 388, 392, 411, 412, 416, 419, 421, 422,

423, 424, 425, 444, 454, 455, 456, 457, 459, 460, 461, 462, 463, 465, 468, 472, 477, 478, 481, 483, 484, 485, 486, 487, 488, 491, 492, 493, 496
Tennessee Valley Authority 1, i, ii, iii, v, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 20, 21, 22, 23, 24, 25, 26, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 46, 47, 48, 49, 50, 51, 52, 54, 55, 56, 59, 62, 63, 64, 65, 66, 68, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 490, 491, 492, 493, 495, 496, 507
terrestrial ecology ..... i, 17, 21
threatened ... i, 26, 33, 37, 72, 77, 89, 98, 101, 102, 109, 127, 144, 154, 177, 179, 180, 205, 217, 220, 222, 231, 274, 306, 311, 313, 330, 331, 373, 382, 389, 391, 392, 394, 405, 408, 416, 420, 421, 479, 496
threatened species 26, 98, 101, 102, 109, 179, 409, 496
TVA Land Policy 82, 83
U.S. Army Corps of Engineers ..... v, 89, 492
U.S. Environmental Protection Agency ..... v, 17, 493, 494
U.S. Fish and Wildlife Service. vi, 19, 20, 50, 55, 62, 63, 64, 65, 72, 79, 151, 152, 153, 243, 265, 266, 271, 296, 306, 314, 317, 344, 349, 350, 354, 360, 492, 494
U.S. Forest Service 9, 68
uncommitted land 76, 81
visual resource ..... i, 5, 55
wetland...i, ii, 17, 18, 20, 35, 36, 37, 38, 40, 42, 49, 50, 51, 62, 72, 77, 79, 85, 92, 93, 94, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 113, 114, 115, 116, 117, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 147, 148, 149, 150, 151, 153, 154, 156, 157, 158, 159, 160, 161, 163, 164, 165, 166, 167, 168, 169, 171, 173, 174, 175, 177, 178, 179, 180, 181, 182, 183, 184, 186, 187, 188, 189, 190, 191, 192, 193, 194, 196, 198, 199, 200, 201, 204, 207, 208, 209, 211, 212, 213, 214, 215, 216, 217, 218, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 236, 237, 238, 240, 241, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 269, 270, 271, 273, 274, 275, 276, 277, 278, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291,

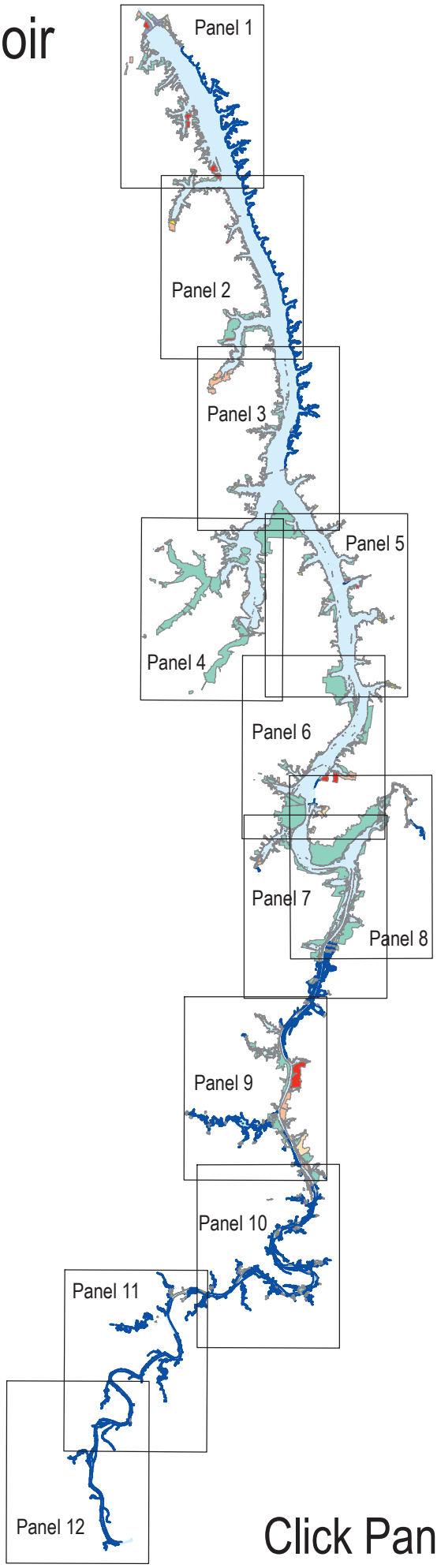
292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 324, 325, 327, 331, 332, 333, 334, 335, 336, 338, 339, 340, 341, 343, 344, 345, 346, 347, 348, 349, 351, 353, 354, 355, 356, 357, 359, 360, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 426, 427, 428, 429, 431, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 454, 455, 456, 458, 460, 462, 465, 466, 467, 468, 469, 470, 471, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 484, 485, 486, 487, 488, 494, 495, 496

wildlife ....i, v, vi, 13, 14, 15, 16, 17, 20, 23, 27, 37, 42, 49, 50, 62, 63, 65, 66, 72, 73, 75, 79, 85, 98, 101, 102, 104, 108, 114, 115, 116, 117, 123, 127, 128, 134, 137, 138, 139, 140, 141, 142, 143, 144, 148, 150, 151, 152, 153, 154, 158, 159, 161, 162, 163, 165, 168, 171, 172, 174, 177, 180, 181, 183, 188, 189, 196, 199, 200, 202, 205, 214, 215, 216, 221, 222, 224, 225, 236, 238, 243, 245, 247, 250, 251, 252, 253, 254, 255, 256, 257, 258, 260, 264, 265, 266, 267, 269, 271, 273, 274, 275, 277, 280, 282, 283, 287, 288, 289, 290, 291, 293, 296, 297, 299, 300, 301, 302, 305, 306, 308, 309, 310, 311, 312, 314, 316, 317, 321, 322, 325, 326, 327, 328, 329, 330, 331, 332, 333, 336, 342, 343, 344, 351, 353, 354, 359, 360, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 393, 394, 395, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 409, 413, 414, 415, 416, 417, 418, 419, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 446, 455, 456, 457, 458, 459, 464, 466, 467, 468, 469, 470, 471, 475, 476, 479, 480, 481, 482, 486, 487, 488, 489, 493, 494, 496

Appendix A – Draft Land Management Plan Maps – Panels 1 through 12

This page intentionally left blank

Kentucky Reservoir



Click Panel to View PDF Map

This page intentionally left blank

Appendix B – Comparison of Parcel Allocations by Alternative

This page intentionally left blank

APPENDIX B

Comparison of Parcel Allocations by Alternative

KENTUCKY RESERVOIR

Of the 74,713.5 acres on Kentucky Reservoir, there are no proposed allocation changes to 64,745.6 acres (86.7 percent); all proposed allocation changes involve 9,967.9 acres (13.3 percent). Of the 9,967.9 acres, TVA would allocate 4,057.5 acres (40.7 percent) to reflect existing land use agreements or commitments. The remaining 5,910.4 acres (59.3 percent) involve proposed parcel allocations that are not based on existing land use agreements or commitments.

[1]Some parcels are separated into smaller portions to show comprehensive consideration of some parcels. Portions of parcels are in bold text with a footnote.

See Tables below:

Table 1 = No Proposed Allocation Changes;
Table 2 = Changes Based on Existing Agreements or Commitments;
Table 3 = Changes NOT based on Existing Agreements or Commitments

Table 1. No Proposed Allocation Changes			
Number of Parcels Per Zone Allocation			
Zone 2	11	Zone 5	9
Zone 3	9	Zone 6	64
Zone 4	189	Zone 7	108

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
1	4	4	129.7
2	2	2	559.7
3[1]	2	2	111.7
4[1]	5	5	170.2
5[1]	6	6	14.3
6	4	4	21.4
8	4	4	150.4
10[1]	7	7	49.6
11	4	4	53.9
12[1]	7	7	23.6
14[1]	7	7	146.4

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
16[1]	7	7	70.6
17	3	3	21.3
19	4	4	3.4
20[1]	7	7	52.0
21	4	4	7.3
22	7	7	0.8
24[1]	7	7	14.3
25	4	4	25.4
26[1]	7	7	4.2
27	4	4	4.4
28[1]	7	7	12.8
29	4	4	65.2
30[1]	7	7	16.9
31	4	4	4.1
32[1]	7	7	35.7
33	4	4	2.7
34[1]	7	7	7.2
36[1]	4	4	143.7
38	4	4	83.1
40[1]	7	7	11.1
42[1]	4	4	5.5
45	7	7	12.3
46[1]	4	4	59.4
47	6	6	54.5
48	4	4	82.0
50	4	4	304.5
51[1]	7	7	22.0
52	4	4	6.2
54[1]	7	7	30.7
55	4	4	6.7
57	4	4	40.7
58[1]	7	7	5.2
60[1]	7	7	69.9
61[1]	4	4	16.6
62[1]	7	7	3.5
63	4	4	11.6
64[1]	7	7	75.3
66	4	4	24.9
67	7	7	3.1
68[1]	7	7	102.8
69	4	4	1.6

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
70	4	4	13.7
71	7	7	13.3
72	6	6	21.0
73[1]	7	7	68.0
75[1]	7	7	18.7
76	4	4	11.5
77[1]	4	4	31.1
78[1]	7	7	104.5
79	4	4	28.2
80[1]	7	7	65.6
81[1]	4	4	915.4
82[1]	6	6	27.0
84[1]	7	7	89.7
85	4	4	31.1
86	4	4	0.5
87[1]	5	5	42.9
88	4	4	175.7
90[1]	6	6	27.3
91	4	4	0.1
93	6	6	3.5
94	7	7	18.7
95[1]	6	6	35.7
96	4	4	43.0
97[1]	5	5	379.6
98	2	2	42.9
99[1]	3	3	33.4
101	4	4	23,758.3
102	3	3	486.8
103	6	6	5.5
109	4	4	129.1
110	2	2	2.9
111[1]	4	4	18.3
112	4	4	11.4
113	4	4	27.6
114	2	2	1.3
116	4	4	27.1
117	6	6	5.1
118	4	4	84.7
120	4	4	2.5
121[1]	6	6	1,186.8
122	4	4	23.1

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
125[1]	7	7	10.5
126[1]	6	6	38.2
130[1]	5	5	19.7
132	4	4	29.4
133[1]	2	2	33.1
134[1]	6	6	2.1
138[1]	4	4	64.9
141	4	4	415.6
142	6	6	6.3
143	6	6	24.0
144	4	4	453.9
146	4	4	11.7
147	2	2	1.7
148[1]	4	4	11.6
150	4	4	62.9
151	4	4	7.2
152	4	4	62.2
154	4	4	3.7
155	4	4	8.7
156	6	6	22.6
157	4	4	9.0
158	6	6	1.9
159	6	6	39.2
160	4	4	16.2
161	4	4	2.2
162	4	4	46.8
165	4	4	12.2
167	6	6	7.4
168	4	4	14.5
170	4	4	0.7
171	4	4	35.8
174	4	4	26.2
176	5	5	3.6
179	3	3	21.2
182	4	4	11.8
183	4	4	22.5
185	4	4	7.7
188	4	4	44.5
191	4	4	4.3
192	4	4	164.3
194	4	4	44.5

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
195	4	4	0.9
197	4	4	29.9
198	2	2	0.8
200	4	4	22.2
201	4	4	2.0
203	4	4	17.5
206	4	4	668.8
209	4	4	16.9
210	4	4	23.7
212	4	4	52.4
214	4	4	2.0
215	4	4	21.6
216	4	4	33.5
218	4	4	77.9
220	4	4	19.6
224	4	4	135.5
225	6	6	13.1
226[1]	3	3	12.0
228	5	5	4.6
229[1]	4	4	0.1
230[1]	6	6	29.6
231	4	4	35.4
232	5	5	1.6
233	7	7	1.9
237	4	4	133.4
238[1]	7	7	24.0
240	4	4	82.3
241[1]	7	7	51.8
242	6	6	4.7
243[1]	7	7	6.8
244	4	4	6.3
245	4	4	53.5
247	4	4	133.8
248	4	4	2.9
249[1]	6	6	35.6
251[1]	7	7	22.3
252	4	4	54.0
255	4	4	112.5
257	7	7	24.6
258	4	4	7.6
260[1]	7	7	25.6

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
261	4	4	0.0
263[1]	7	7	11.0
266	4	4	3,633.3
267[1]	2	2	3.9
271[1]	5	5	83.1
273[1]	4	4	447.7
277[1]	7	7	79.5
278	4	4	18.5
280	4	4	214.0
282	7	7	7.5
283	4	4	8.9
284	7	7	23.4
286	6	6	2.2
287	4	4	24.9
288[1]	7	7	69.4
289[1]	4	4	11.9
290[1]	6	6	48.6
291	4	4	0.9
293	4	4	4.8
294	6	6	4.4
295[1]	7	7	24.6
297	7	7	97.0
298	4	4	331.6
300	7	7	12.0
301[1]	4	4	2,601.8
302[1]	6	6	14.7
303[1]	7	7	63.9
304	4	4	10.0
305[1]	6	6	5.9
306	7	7	26.9
307	4	4	0.7
309	7	7	25.4
311	4	4	475.6
314	4	4	47.3
315	6	6	11.0
317[1]	6	6	9.1
318	4	4	185.4
319[1]	6	6	8.7
320	7	7	10.8
321	4	4	2.9
322[1]	7	7	11.1

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
325[1]	7	7	60.1
328[1]	7	7	10.9
329	4	4	48.8
331	6	6	4.4
332	4	4	203.1
333[1]	7	7	39.8
334	4	4	3.3
337[1]	7	7	39.2
338	6	6	8.8
339	4	4	113.5
340	4	4	4.9
341	7	7	23.3
342	4	4	1.2
343	4	4	14.3
344	7	7	17.8
345	4	4	99.1
348	2	2	3.3
349	4	4	10.8
350	4	4	13.0
354	4	4	3,023.8
358	4	4	40.6
361	4	4	17.8
362	6	6	15.3
363	4	4	21.9
365	4	4	46.2
366	7	7	0.3
367	6	6	5.6
368[1]	7	7	35.5
369	4	4	14.5
371[1]	4	4	24.0
373	6	6	4.4
375[1]	4	4	6,360.6
377	2	2	1.8
382	4	4	26.2
385	4	4	56.5
386	6	6	39.0
387[1]	7	7	6.0
388	4	4	243.7
393	6	6	2.6
394[1]	7	7	24.1
395	6	6	3.4

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
396	6	6	1.4
397	6	6	14.1
398[1]	4	4	77.8
400[1]	6	6	282.3
402[1]	7	7	17.1
404	4	4	34.3
405	6	6	14.1
406	4	4	162.1
407	7	7	14.5
408	4	4	10.1
409[1]	7	7	32.6
410[1]	6	6	8.3
411	4	4	18.5
412[1]	7	7	34.7
413	6	6	2.2
414	4	4	10.2
417	4	4	31.1
418	7	7	12.9
419	4	4	6.4
420	6	6	7.6
421[1]	7	7	10.7
422[1]	6	6	3.0
424	6	6	15.3
425	4	4	120.1
426	3	3	28.1
427	4	4	4.6
428	4	4	476.6
430	4	4	46.7
431[1]	7	7	74.2
432	4	4	17.7
433[1]	7	7	27.0
434[1]	4	4	51.7
435[1]	7	7	32.3
436[1]	7	7	46.7
438[1]	7	7	37.7
439	4	4	25.1
441	4	4	17.2
442	4	4	851.4
443[1]	7	7	57.5
444	4	4	50.5
445[1]	7	7	13.2

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
446[1]	3	3	189.9
448[1]	7	7	66.7
449	4	4	5.0
450[1]	7	7	32.4
451	4	4	26.8
452[1]	7	7	79.3
454	4	4	1,145.8
455	6	6	98.6
456[1]	7	7	10.7
457	4	4	75.8
458[1]	7	7	15.3
459	4	4	2.8
461[1]	4	4	356.3
462	6	6	4.8
465[1]	7	7	27.8
466	4	4	161.5
467	7	7	29.5
468	6	6	1.7
469	4	4	28.6
470[1]	7	7	10.6
471	4	4	11.8
472[1]	7	7	15.4
473	4	4	3.8
474[1]	4	4	24.9
475[1]	7	7	83.7
476	4	4	36.5
477[1]	7	7	10.2
478	4	4	33.6
479[1]	5	5	24.0
480[1]	4	4	24.5
481	6	6	1.3
482	6	6	287.5
483	4	4	49.0
485[1]	7	7	10.7
486	4	4	34.5
488[1]	7	7	16.2
489	4	4	0.7
490[1]	7	7	4.4
491	6	6	6.0
493	7	7	25.0
498	6	6	67.8

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
499	4	4	2.7
500[1]	7	7	32.1
501	4	4	55.0
507	4	4	31.9
508	4	4	43.1
509[1]	7	7	47.9
510	4	4	28.2
511[1]	7	7	44.4
513[1]	4	4	95.1
515[1]	7	7	33.1
516	4	4	15.1
517	4	4	77.8
518	6	6	26.4
519[1]	7	7	68.2
520	4	4	45.4
521	6	6	27.2
522	4	4	212.3
523	6	6	346.8
524	3	3	39.0
525	4	4	97.5
526[1]	7	7	170.3
529	7	7	104.4
532	7	7	7.5
535	7	7	30.6
536	4	4	101.3
537[1]	6	6	36.4
539	7	7	21.0
540	6	6	299.3
541[1]	7	7	21.9
542[1]	4	4	85.8
543[1]	7	7	31.5
544[1]	7	7	63.0
546	7	7	30.9
547[1]	4	4	71.0
548	7	7	55.1
549	6	6	6.2
552	7	7	27.2
553[1]	7	7	5.6
554[1]	7	7	51.6
555	4	4	85.2
556	6	6	27.6

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
557[1]	7	7	19.2
558	6	6	24.6
559[1]	7	7	184.6
560	4	4	1.7
561	4	4	201.0
564[1]	4	4	934.8
568	6	6	157.1
569	6	6	146.7
570	4	4	75.8
572	3	3	148.4
Total = 390 Parcels or Portions of a Parcel		**Total = 64,745.6 Acres**	

[1]Denotes a portion of the parcel

Table 2. Changes Based on Existing Agreements or Commitments			
	No Action[1] Parcels	Proposed Allocation Parcels	
Zone 2	2	48	*5.4 Percent of Kentucky Lands*
Zone 3	7	2	
Zone 4	188	19	
Zone 5	26	7	279 Parcels 4,057.5 Acres
Zone 6	15	70	
Zone 7	41	133	

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
3[1]	5	2	10.0
4[1]	4	5	258.2
5[1]	2	6	2.5
5[1]	5	6	3.1
7	5	2	15.9
9	4	2	3.6
10[1]	4	7	0.1
12[1]	4	7	3.7
13	4	6	3.6
14[1]	4	7	6.7
15	7	6	4.4
16[1]	4	7	0.2
18	7	6	1.4
20[1]	4	7	0.1
23[1]	4	6	0.8
23[1]	7	6	1.2
24[1]	4	7	8.6
26[1]	4	7	24.8
28[1]	4	7	0.2
30[1]	4	7	1.8
32[1]	4	7	1.3
34[1]	4	7	21.7
39	4	6	71.4
40[1]	4	7	0.4
41[1]	4	2	1.1
41[1]	5	2	3.0
42[1]	7	4	7.2
43	7	6	5.9
44	6	2	61.4
46[1]	7	4	1.3

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
51[1]	4	7	3.4
53	4	6	7.2
54[1]	4	7	4.6
58[1]	4	7	30.9
60[1]	4	7	2.0
61[1]	7	4	0.2
62[1]	4	7	3.7
64[1]	4	7	3.2
68[1]	4	7	0.5
73[1]	6	7	1.7
74	7	6	11.2
75[1]	4	7	76.2
77[1]	7	4	1.5
78[1]	4	7	0.9
80[1]	4	7	0.4
82[1]	4	6	0.2
84[1]	4	7	51.4
87[1]	4	5	5.0
87[1]	7	5	107.6
90[1]	3	6	251.1
90[1]	4	6	247.5
92	5	2	4.7
95[1]	4	6	0.2
100	4	2	92.4
101a	4	6	13.7
101b	4	7	1.1
104	3	2	0.6
105	3	7	12.7
106	4	7	2.1
107	3	7	25.7
108	3	7	11.9
119	4	7	10.4
121[1]	4	6	4.3
123	4	3	0.4
124	4	2	0.4
125[1]	4	7	5.2
126[1]	4	6	0.6
127	4	2	0.5
129[1]	4	2	7.6
129[1]	5	2	5.5
130[1]	4	5	0.8

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
133[1]	4	2	8.6
134[1]	4	6	5.3
134[1]	5	6	6.4
135	5	4	10.4
137	5	2	0.7
145	4	7	15.6
148[1]	5	4	1.8
149	5	2	1.1
153	5	2	7.1
163	5	2	4.6
166	4	2	2.5
169	5	2	1.2
172	4	2	1.8
173	4	6	8.3
175	5	4	3.1
178	5	2	0.6
180	4	6	15.4
181	4	2	0.6
184	4	7	2.1
187	4	2	0.7
189	4	7	7.9
193	4	6	2.5
196	6	4	3.4
199	6	4	2.6
205	5	2	4.6
207	4	2	1.4
208	4	6	25.8
211	4	2	2.4
213	5	2	3.9
217	4	2	1.6
219	4	2	2.9
221	4	2	0.9
222	4	6	1.9
223	4	5	5.5
227	3	2	0.8
229[1]	6	4	2.4
230[1]	5	6	2.1
235	4	6	18.1
236	4	2	1.7
238[1]	4	7	24.8
239	4	7	11.1

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
241[1]	4	7	39.2
243[1]	4	7	0.2
249[1]	4	6	20.8
250	5	2	3.9
251[1]	4	7	42.8
254	4	7	11.6
256	4	7	108.9
257	4	7	7.9
259[1]	4	6	9.2
259[1]	7	6	52.0
260[1]	4	7	2.4
262	7	6	3.5
263[1]	4	7	0.1
267[1]	4	2	67.0
268	4	6	2.2
269	4	7	7.1
270	4	7	25.8
272	4	7	32.3
273[1]	7	4	0.7
274	5	2	9.2
275	4	7	2.0
277[1]	4	7	4.7
279	4	6	2.3
281	5	2	5.0
285	7	6	0.8
288[1]	4	7	17.9
289[1]	7	4	5.1
290[1]	4	6	0.1
295[1]	4	7	55.2
296[1]	4	6	2.6
296[1]	7	6	67.8
301[1]	6	4	15.5
302[1]	4	6	16.7
303[1]	4	7	0.3
305[1]	4	6	15.1
308	4	2	7.9
312	4	7	3.8
316	4	7	9.4
317[1]	4	6	6.0
319[1]	4	6	2.9
322[1]	4	7	0.7

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
325[1]	4	7	0.1
326[1]	7	6	8.0
328[1]	4	7	5.4
330	4	7	52.4
333[1]	4	7	0.3
335	4	3	1.7
336	7	6	3.0
337[1]	4	7	19.5
341[1]	4	7	27.8
346	4	7	11.7
347	4	6	36.9
351	4	2	35.2
352	4	6	1.2
353	4	2	10.9
355	4	7	22.0
356	4	7	11.7
360	4	7	5.9
368[1]	4	7	16.3
370	4	7	3.2
372	6	7	1.4
374	4	2	6.0
376	4	2	26.2
378	4	7	11.4
380	4	2	16.1
381	4	7	8.7
383	6	5	28.3
384	4	6	48.6
387[1]	4	7	1.9
389	5	2	24.4
390	4	7	3.7
391	4	7	39.2
392[1]	4	7	45.5
392[1]	6	7	4.1
394[1]	6	7	0.4
399[1]	4	7	14.4
399[1]	5	7	1.6
400[1]	2	6	10.4
401	6	2	4.4
402[1]	4	7	0.8
403	4	6	1.2
409[1]	4	7	8.0

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
410[1]	4	6	0.8
412[1]	4	7	5.3
415	4	7	23.4
416	5	2	1.0
418	4	7	8.4
421[1]	4	7	1.5
422[1]	7	6	15.5
429	4	6	3.2
431[1]	4	7	0.5
433	4	7	3.7
434[1]	7	4	1.1
435[1]	4	7	3.2
436[1]	4	7	0.5
437	4	6	6.2
438[1]	4	7	0.5
440	4	7	56.1
443[1]	4	7	1.5
445[1]	4	7	14.7
447[1]	3	7	6.3
447[1]	4	7	67.0
448[1]	4	7	13.2
450[1]	4	7	1.0
452[1]	4	7	0.8
453	7	6	5.7
456[1]	4	7	5.3
458[1]	4	7	14.3
460[1]	4	6	3.1
460[1]	7	6	1.5
463	4	7	5.3
464	7	6	10.5
465[1]	4	7	1.0
468a[1]	4	7	2.9
468a[1]	6	7	2.9
470[1]	4	7	0.7
472[1]	4	7	1.4
474[1]	7	4	0.6
475[1]	4	7	4.8
477[1]	4	7	30.4
479[1]	7	5	4.9
485[1]	4	7	11.7
485[1]	6	7	11.9

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
487	7	6	13.2
488[1]	4	7	0.4
490[1]	4	7	0.2
492	5	2	5.4
494	7	6	30.3
495	4	7	5.4
497	4	7	17.6
500[1]	4	7	1.3
502	4	2	12.3
504	4	6	0.8
505	4	7	91.3
506	4	7	46.5
509[1]	4	7	4.8
511[1]	4	7	1.8
512	7	6	3.6
513[1]	7	4	2.5
514	4	7	11.7
515[1]	4	7	0.5
519[1]	4	7	18.8
526[1]	4	7	17.0
527	7	6	1.8
528	7	6	9.1
531	7	6	2.6
533	7	6	29.1
534	7	6	19.4
537[1]	7	6	45.3
541[1]	4	7	3.3
542[1]	7	4	0.02
543[1]	4	7	6.6
544[1]	4	7	0.6
545	7	6	3.9
547[1]	7	4	7.1
550	7	6	17.1
551	7	6	7.0
553[1]	4	7	19.4
554[1]	4	7	2.0
557[1]	6	7	0.4
559[1]	4	7	1.3
562	4	7	97.8
563	4	6	1.5
564[1]	7	4	5.6

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
565	4	7	26.6
567[1]	4	7	1.4
567[1]	6	7	78.0
Total = 279 Parcels or Portions of a Parcel		**Total = 4,057.5 Acres**	

[1]Denotes a portion of the parcel

This page intentionally left blank

TENNESSEE VALLEY AUTHORITY

Multiple Reservoir Land Management Plans

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Volume VI
Nickajack Reservoir

December 2016

TVA

This page left blank intentionally

Document Type: EIS Administrative Record
Index Field: Draft EIS
Project Name: Multiple RLMPs & CVLP EIS
Project Number 2016-2

NICKAJACK RESERVOIR

Draft Reservoir Land Management Plan

VOLUME VI

MULTIPLE RESERVOIR LAND MANAGEMENT PLANS
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Prepared by
Tennessee Valley Authority

December 2016

This page intentionally left blank

Table of Contents

ACRONYMS AND ABBREVIATIONS ..... **VI-III**
CHAPTER 1. INTRODUCTION **VI-1**
1.1 Tennessee Valley Authority History VI-1
1.2 Overview of TVA's Vision and Environmental Policy VI-2
1.2.1 TVA's Mission and Vision VI-2
1.2.2 Environmental Policy VI-2
1.2.3 Land Policy VI-2
1.2.4 Shoreline Management Policy VI-3
1.3 The Natural Resource Plan VI-5
1.4 Purpose of Reservoir Land Planning VI-6
CHAPTER 2. REGIONAL OVERVIEW **VI-9**
2.1 History of Nickajack Dam VI-9
2.2 Nickajack Reservoir and Present Shoreline VI-10
2.2.1 Land Use and Prime Farmland VI-11
2.2.2 Recreation VI-13
2.2.3 Terrestrial Ecology VI-15
2.2.4 Aquatic Ecology VI-20
2.2.5 Threatened and Endangered Species VI-23
2.2.6 Water Quality VI-35
2.2.7 Wetlands VI-37
2.2.8 Floodplains VI-39
2.2.9 Air Quality VI-39
2.2.10 Cultural and Historic Resources VI-40
2.2.11 Natural Areas and Ecologically Significant Sites VI-43
2.2.12 Aesthetics and Visual Resources VI-44
2.2.13 Noise VI-46
2.2.14 Socioeconomics and Environmental Justice VI-47
2.2.15 Environmental Justice VI-48
2.3 Major Features of Nickajack Reservoir VI-49
2.3.1 Raccoon Mountain VI-49
2.3.2 Hales Bar Dam VI-50
2.3.3 Trail of Tears National Historic Trail VI-52
2.4 The Future Management of Reservoir Lands VI-52
CHAPTER 3. LAND PLANNING PROCESS **VI-53**
3.1 Process for Planning Land VI-53

3.2 Nickajack Reservoir Goals and Objectives VI-58
3.3 Parcel Allocations VI-59
3.4 Property Administration VI-64
CHAPTER 4. PARCEL DESCRIPTIONS VI-67
CHAPTER 5. PLANNING TEAM VI-93
CHAPTER 6. LITERATURE CITED VI-95
GLOSSARY VI-99
INDEX VI-101

Appendices

Appendix A – Draft Land Management Plan Maps – Panels 1 through 4 ..... VI-103
Appendix B – Comparison of Parcel Allocations by Alternative VI-107

List of Tables

Table 2-1. Prime Farmland and Farmland of Statewide Importance on Nickajack Reservoir VI-12
Table 2-2. Developed Public Recreation Areas on TVA Lands on Nickajack Reservoir VI-14
Table 2-3. Developed Commercial, Private and Semi-Private (camps) Recreation Areas on TVA Lands on the Nickajack Reservoir VI-14
Table 2-4. Land Cover on TVA Owned Parcels and within the Vicinity of Nickajack Reservoir VI-15
Table 2-5. Invasive Non-native Plant Species that Pose a Severe Threat Known to Occur in Tennessee VI-19
Table 2-6. RFAI and Benthic Community Scores for Nickajack Reservoir (2011-2015) VI-21
Table 2-7. Fish Species in Nickajack Reservoir VI-21
Table 2-8. Federally and State-Listed Species in the Nickajack Reservoir Counties VI-24
Table 2-9. Habitat Requirements for Plant Species of Conservation Concern Within 5 Miles of Nickajack Reservoir VI-28
Table 2-10. Habitat Requirements for Terrestrial Wildlife Species of Conservation Concern within 3 Miles of Nickajack Reservoir VI-30
Table 2-11. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Nickajack Reservoir VI-33
Table 2-12. Ecological Health Indicators at Nickajack Reservoir – 2012 ..... VI-36
Table 2-13. Direct Reservoir Average Daily Water Supply Withdrawals and Wastewater Discharges – 2016 ..... VI-37
Table 2-14. Wetland Types within the Nickajack Reservoir VI-38
Table 2-15. TVA Natural Areas Along Nickajack Reservoir VI-44
Table 2-16. Population and Percent Growth – Nickajack Reservoir VI-48
Table 2-17. Employment and Income, 2010-2014 – Nickajack Reservoir VI-48
Table 2-18. Minority Population and Poverty, 2010-2014 – Nickajack Reservoir VI-49
Table 3-1. Land Use Zone Definitions VI-53

Table 3-2. Summary of Proposed Land Use Allocations for Nickajack Reservoir Land Management Plan (Alternative B) VI-59

Table 3-3. Draft Nickajack Reservoir Land Management Plan (Alternative B) and 2011 Comprehensive Valleywide Land Plan Comparison VI-62

List of Figures

Figure 1-1. TVA Managed Reservoir Land VI-4

Figure 3-1. Percent of Nickajack Reservoir Acreage Allocated by Zone VI-60

This page intentionally left blank

ACRONYMS AND ABBREVIATIONS

APE	Area of Potential Effect
CFR	Code of Federal Regulations
CVLP	Comprehensive Valleywide Land Plan
dBA	A-Weighted Decibel
EIS	Environmental Impact Statement
EO	Executive Order
HPA	Habitat Protection Area
msl	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRP	Natural Resource Plan
PCB	Polychlorinated Biphenyl
RFAI	Reservoir Fish Assemblage Index
RLMP	Reservoir Land Management Plan
ROW	Right-of-Way
RVSMP	Reservoir Vital Signs Monitoring Program
SMI	Shoreline Management Initiative
SMP	Shoreline Management Policy
SWA	Small Wild Areas
TRM	TRM
TVA	Tennessee Valley Authority
TWRA	Tennessee Wildlife Resources Agency
U.S.	United States
USDA	U.S. Department of Agriculture
USDOI	U.S. Department of the Interior
USGS	U.S. Geologic Survey
Valley	Tennessee River Valley Region
WOA	Wildlife Observation Areas

This page intentionally left blank

CHAPTER 1. INTRODUCTION

The draft Nickajack Reservoir Land Management Plan (RLMP) is a study of the Tennessee Valley Authority (TVA)-managed public land surrounding Nickajack Reservoir. It is one of eight draft RLMP s considered under Alternative B of this Environmental Impact Statement (EIS). The EIS Volume I contains information on the scoping process, allocation process, alternatives, comparison of the alternatives, and analysis of impacts. In addition, the EIS contains a summary, an index and appendices.

Volume VI of the EIS addresses TVA's draft RLMP for Nickajack Reservoir. This Volume provides background information about TVA land management throughout its history and specifically TVA management of public land surrounding Nickajack Reservoir. It explains the purpose of the draft RLMP and describes the process used in its development. The draft RLMP includes the planning process, which lists the objectives around which the RLMP was developed and a summary of the allocation process. The Nickajack Reservoir Regional Overview (Chapter 2) describes the natural and social development of the reservoir and the surrounding area. The Parcel Descriptions (Chapter 4) include total acreage and parcel descriptions documenting proposed land management allocations. The allocation map is included as Appendix A of this draft RLMP.

Once TVA completes its Multiple RLMP EIS, this Volume will serve as the consolidated planning document addressing management of TVA reservoir lands on Nickajack Reservoir and will be available to TVA staff and the public.

1.1 Tennessee Valley Authority History

President Franklin Roosevelt needed creative solutions to lift the nation out of the depths of the Great Depression, and TVA is considered one of his most innovative initiatives. Roosevelt envisioned TVA as an agency different from any other. He asked Congress to create "a corporation clothed with the power of government but possessed of the flexibility and initiative of a private enterprise." On May 18, 1933, Congress passed the Tennessee Valley Authority Act (TVA Act). A link to the TVA Act is available at https://www.tva.com/About-TVA/Our-History.

From the start, TVA established a unique problem-solving approach to fulfilling its mission: Integrated Resource Management. Each issue TVA faced—whether it was power production,

navigation, flood control, malaria prevention, reforestation, or erosion control—was studied in its broadest context. TVA weighed each issue relative to the others. From this beginning, TVA has held fast to its strategy of integrated solutions, even as the issues changed over the years. A short TVA history is available at http://www.tva.com/abouttva/history.htm.

1.2 Overview of TVA's Mission and Environmental Policy

1.2.1 TVA's Mission

TVA has a rich history of improving quality of life and economic prosperity for people and businesses in the TVA service area. TVA was created by Congress in 1933 and charged with a unique mission—to improve the quality of life in the Valley through the integrated management of the region's resources. For more than eight decades, we have worked tirelessly to carry out that mission, and we are working just as hard to make life better for the nine million people who live in the Valley today. We serve the people of the Tennessee Valley by focusing on three key areas: energy, environment, and economic development.

1.2.1 Environmental Policy

As stated in TVA's 2007 Strategic Plan, "TVA will be proactive in addressing environmental concerns, including those related to global climate change." About half of the identified strategic objectives and critical success factors in the plan relate directly to TVA's environmental activities and policy-making.

Following the release of the 2007 Strategic Plan, the TVA Board asked for the development of an integrated environmental policy to outline objectives and critical success factors across the multiple areas of TVA's activities. In 2008, the TVA Board approved the Environmental Policy, which provides guiding principles for reducing the environmental impacts of TVA operations while continuing to provide reliable and affordable power to the Valley. In 2010, a biennial review of the Environmental Policy was completed, which did not result in major changes or revisions. TVA's overarching Environmental Policy objective is to provide cleaner, reliable, and affordable energy; support sustainable economic growth in the Valley; and engage in proactive environmental stewardship in a balanced and ecologically sound manner. A copy of the Environmental Policy is available at http://www.tva.com/environment/policy.htm.

1.2.2 Land Policy

On behalf of the United States (U.S.), TVA originally acquired approximately 1.3 million acres of land in the Valley. Creation of the TVA reservoir system inundated approximately 470,000 acres with water. TVA has transferred or sold approximately 508,000 acres, the majority of which was

transferred to other federal and state agencies for public uses. TVA currently controls approximately 293,000 acres of reservoir lands, which continue to be managed pursuant to the TVA Act (Figure 1-1). As part of its management of these lands, TVA allocates them to various land use zones (see Section 3.1). These TVA-managed lands are frequently referred to as "TVA lands" in this document.

In 2006, TVA adopted a Land Policy to guide retention, disposal, and planning of real property. Accordingly, it is TVA's policy to manage its lands to protect the integrated operation of the TVA reservoir and power systems, to provide for appropriate public use and enjoyment of the reservoir system, and to provide for continuing economic growth in the Valley. Recognizing that historical land transfers have contributed substantially to meeting multipurpose objectives, TVA maintains the policy of retaining in public ownership the reservoir lands under its control except in those rare instances where the benefits to the public will be so significant that transferring lands to private ownership or another public entity is justified. The Land Policy is available at https://www.tva.gov/Environment/Environmental-Stewardship/Land-Management/TVA-Land-Policy.

1.2.3 Shoreline Management Policy

In November 1998, TVA completed a Shoreline Management Initiative (SMI) EIS (TVA 1999) analyzing possible alternatives for managing residential shoreline development throughoutF(USNPS the Valley. In April 1999, TVA adopted the agency's current Shoreline Management Policy (SMP), which incorporates a strategy of managing public shoreline through an integrated approach that conserves, protects, and enhances shoreline resources and public use opportunities while providing for reasonable and compatible use of the shoreline by adjacent residents. The SMP defines the standards for vegetation management, docks, shoreline stabilization, and other residential shoreline alterations. The SMI EIS is available at https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy.

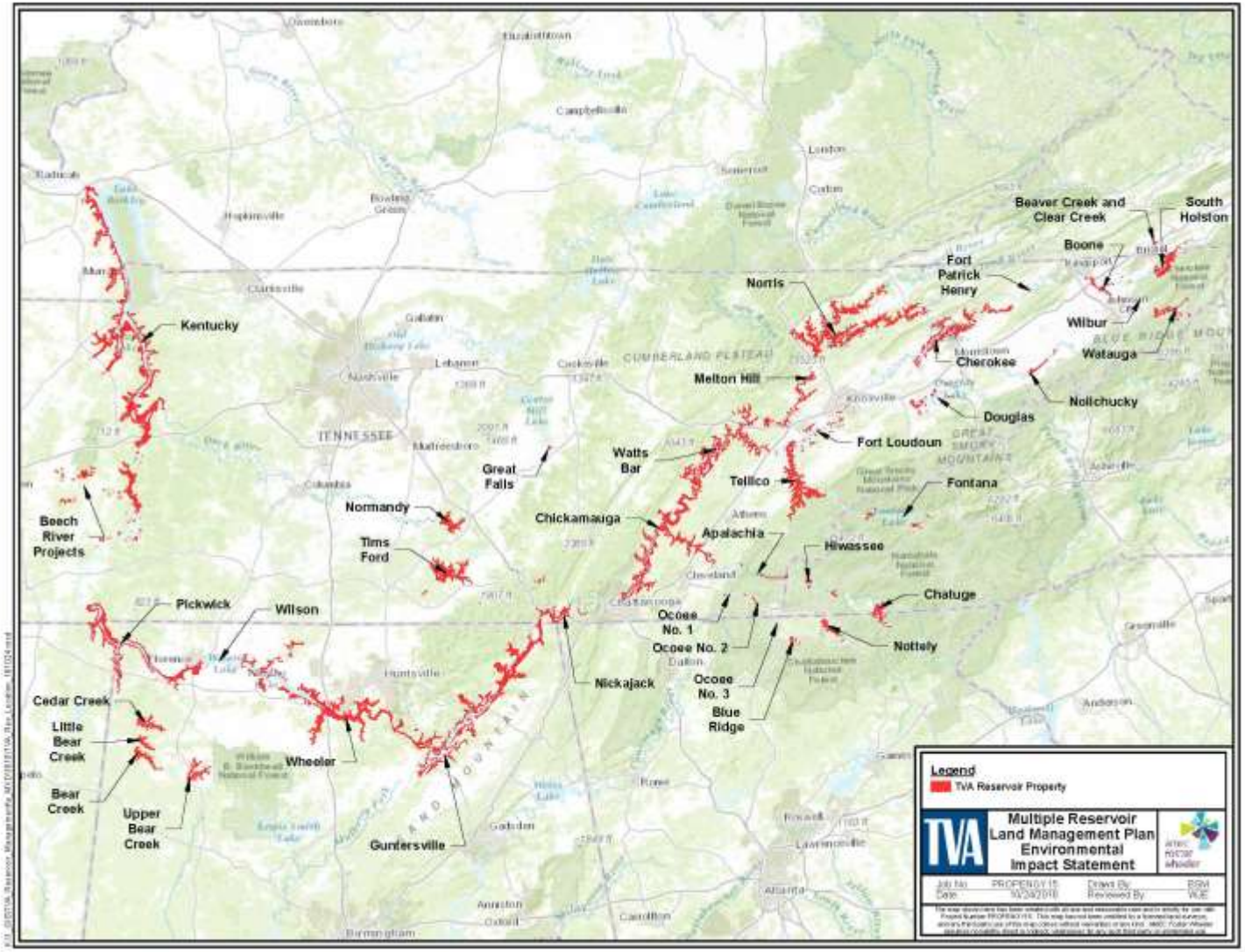


Figure 1-1. TVA Managed Reservoir Land

1.3 The Natural Resource Plan

In 2011, TVA completed a Natural Resource Plan (NRP) (TVA 2011) that strategically guides the management of both renewable and nonrenewable resources, underscoring the importance of protecting those resources that will be lost forever if they are not actively protected or improved today. TVA is one piece of the solution and recognizes the need for a coordinated and collaborative effort to meet the near- and long-term resource needs. As such, the NRP is designed to:

- Integrate the objectives of six resource areas (biological, cultural, recreation, water, public engagement and reservoir lands planning)
- Provide optimum public use benefit
- Balance competing and sometimes conflicting resource uses

These competing interests, coupled with today's environmental awareness and focus on preserving nonrenewable resources, underscore the necessity for a consistent approach to the management of TVA lands. The NRP represents TVA's high-level strategy for managing its natural resources in the near and long term.

Through implementation of the NRP, TVA's biological resource management programs focus on protecting and enhancing the biological resources of the Tennessee Valley. This is accomplished through the continued evaluation of biological resources, which allows TVA to prioritize and then preserve sensitive resources (e.g., threatened and endangered species) and unique resources (e.g., old growth bottomland hardwood stands), as well as conserve renewable resources (e.g., forests and native warm season grasses) in a sustainable manner to support diverse habitats for wildlife populations.

The NRP programs promote environmentally sustainable recreational use on TVA-managed lands such as these along Nickajack Reservoir. Dispersed recreation, such as camping, bank fishing, and hiking, can create both positive and negative impacts on natural resources. TVA has taken a proactive approach to reducing the negative impacts such as habitat or species damage while providing users with sustained, high-quality recreational experiences.
Finally, partnerships and cooperative projects with state and other federal agencies and nongovernmental organizations have been developed in an effort to support the current

biological resources management efforts. It is critical for regional stakeholders to collaborate on protection, enhancement and conservation efforts.

Detailed implementation plans, such as this draft RLMP, are being developed based on the NRP to drive specific implementation efforts. The NRP is available at https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan.

1.4 Purpose of Reservoir Land Planning

As a regional development agency and the nation's largest public power provider, TVA is committed to protecting and sustaining the environmental resources of the Valley for future generations through leadership in clean energy innovation and environmental management. In managing its public lands and resources, TVA seeks to provide efficient resource stewardship that is responsive to stakeholder interests.

TVA intends to manage its public land for an optimum level of multiple uses and benefits that protect and enhance natural, cultural, recreational, and visual resources in a cost-effective manner. Through this approach, TVA ensures that resource stewardship issues and stakeholder interests are considered while optimizing benefits and minimizing conflicts.

As part of the NRP, TVA developed a Comprehensive Valleywide Land Plan (CVLP). The CVLP guides resource management and administration decisions on the approximately 293,000 acres of TVA lands around 46 reservoirs. It identifies the most suitable uses for the land under TVA's control, identifying areas for project operations, sensitive resource management, natural resource conservation, industrial/commercial development, developed recreation, and shoreline access. The objectives of the CVLP are designed to implement TVA's mission of serving the Valley through energy, environment, and economic development. Under the CVLP, TVA will develop and update RLMPs, such as this draft plan, for a portion of a reservoir, an entire reservoir, or a group of reservoirs. RLMPs are consistent with TVA's policies and programs discussed within this chapter.

The CVLP will be recalibrated as needed (as described under Alternative B in Volume I of this EIS, TVA proposes to update the target ranges of the CVLP to incorporate the findings of the eight draft RLMPs). The CVLP was based, in part, on the anticipation that some parcels of land may be better allocated to different land use zones from those initially identified. For example, field assessments may identify additional areas that warrant the sensitive resource

management allocation. In addition, during the creation or update of each individual RLMP, TVA may determine, either for its own management purposes or as a result of public input, that certain parcels of land should be used differently from how they have been used in the past. The preliminary results of the Nickajack Reservoir planning effort have been included in determining the proposed revisions to the CVLP.

The draft Nickajack RLMP and proposed revisions to the CVLP will be included in the five-year cyclic review of the NRP.

This page intentionally left blank

CHAPTER 2. REGIONAL OVERVIEW

The headwaters of the Tennessee River are in eastern Tennessee, in southwestern Virginia, western North Carolina, and in northern Georgia. The Tennessee River is formed by the confluence of the Holston and French Broad rivers just above Knoxville, Tennessee. The river flows in a southwesterly direction through Tennessee, crosses northern Alabama, forms a small portion of the northeastern boundary of Mississippi, and then flows north through western Tennessee and western Kentucky to empty into the Ohio River at Paducah, Kentucky, a distance of about 650 miles. The Tennessee River drains an area of 40,910 square miles, about equal to the area of Ohio. The headwaters are in the Great Smoky Mountains and the Blue Ridge Mountains, which are the highest ranges east of the Rockies. The mountain region is in striking contrast to the relatively flat lands of northern Alabama and to the rolling land of western Kentucky.

The TVA Act was amended August 31, 1935, requiring TVA to report to Congress their recommendations for the unified development of the Tennessee River System. The proposed system would include nine main river, multi-purpose dams, and three or more tributary storage dams. The system would contribute substantially to the control of floods on the Tennessee River, lower Ohio, and lower Mississippi Rivers, establish a formalized navigation channel, and provide many related benefits, including a large supply of electric power. By the end of 1970, the integrated water control system in the Valley was comprised of 32 major dams, nine on the Tennessee River and 23 on tributaries.

2.1 History of Nickajack Dam

The Nickajack project was first presented in September 1963 and was established to provide a solution to the navigational constraints and also to eliminate foundation issues associated with the Hales Bar Dam. It was the eighth dam constructed by TVA along the main Tennessee River. On April 1, 1964, following the approval by the TVA Board in January, the construction of Nickajack Dam began.

Nickajack Dam was constructed along the Tennessee River at river mile 427.7 to replace the old Hales Bar Dam that was located only 6.4 miles upstream. The construction went uninterrupted for 3.5 years and the dismantling of Hales Bar Dam was complete on December 14, 1967. The Nickajack Dam is located in Marion County, Tennessee, 18 miles west

of Chattanooga, Tennessee, and about 2 miles northwest of the junction of the Alabama, Georgia, and Tennessee state lines. The Nickajack Dam is roughly equidistant from four major metropolitan areas: Nashville, Knoxville, Atlanta, and Birmingham.

The dam is a combination of concrete gravity spillways and earth embankment structure with a total length of 3,767 feet and maximum height of 95 feet. Earth embankments account for 2,418.4 feet of the total length. The concrete, overflow-type spillway is located approximately in the middle of the original riverbed with the auxiliary lock on the right side and the trashway on the left side looking downstream. The spillway consists of ten gate openings, 40 feet wide, separated by 7.5-foot thick piers. The total length is 482.5 feet which includes the right end pier and the left training wall.

The Nickajack powerhouse and service bay is 372-feet-long with four 24,300-kilowatt units. Provided in the design, Nickajack Dam has two parallel navigation locks, one auxiliary lock that is 110-feet-wide by 600-feet-long, and a partially complete main lock that is 110-feet-wide by 800-feet-long. TVA would complete the main lock when the need arises. Currently, the 110-feet-wide by 600-feet-long lock can lift as many as nine large barges at a time (TVA 1972).

2.2 Nickajack Reservoir and Present Shoreline

Nickajack Reservoir is located in Marion and Hamilton counties in Tennessee. The reservoir has 178.7 miles of shoreline (TVA 1999) and TVA owns approximately 80.7 miles of the reservoir shoreline on Nickajack Reservoir. The water surface area is 10,370 acres and extends 46.3 miles upstream to Chickamauga Dam. After Nickajack Reservoir was filled, portions of Hales Bar Dam were removed to allow free navigation and to achieve desired streamflows (TVA 1972).

Designed to be a run-of-river project, the Nickajack Reservoir has no flood storage capacity. Nickajack Reservoir is the sixth “step” in the “stairway” of TVA reservoirs and locks that carry barges up and down the Tennessee River and stretches for 46 miles upstream, from the Chickamauga Dam in Marion and Hamilton counties.

In preparation of the construction of Nickajack Dam, TVA made contractual agreements with the state of Tennessee, L&N Railroad Company, and impacted utility companies to perform certain related work or to adjust their properties located in the reservoir area. No additional preparation or adjustments were necessary for the Nickajack Dam upstream of the old Hales Bar Dam (TVA 1972).

2.2.1 Land Use and Prime Farmland

TVA originally acquired approximately 6,772 acres of land in fee; approximately 983 acres of flowage easements; and approximately 12 acres of highway easements for Nickajack Reservoir. TVA sold or transferred approximately 928 acres of land from the original acquisition. Approximately 3,305 acres are inundated or flood prone. The remaining approximate 3,604.7 acres are the scope of this RLMP. These lands are currently in accordance with allocations made by TVA in the Nickajack RLMP completed in 1990.

The area surrounding the reservoir is primarily rural except for the portions of the reservoir that is located in larger cities such as Chattanooga. The shoreline of Nickajack Reservoir is composed of a variety of land uses including forested areas, residential development, suburban areas, parks, farmed areas, recreational and commercial areas and some industrial uses. These uses are generally reflected in the land cover database for the parcels around the reservoir and the surrounding area which identifies land cover in these areas as primarily forested and developed open space. Developed open space includes single family housing units on large lots, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes.

According to TVA's 1998 SMI EIS, TVA owns approximately 80.7 miles of the 178.7 miles of shoreline (45 percent) on Nickajack Reservoir (see Volume I, Table 3-1). Approximately 55percent of the shoreline miles on this reservoir is privately owned, and is available for residential shoreline access development (see Volume I, Table 3-2). In the SMI EIS TVA estimated that of that 55 percent, approximately 25 percent of this privately owned shoreline is currently developed with residential subdivisions; TVA holds flowage easement rights along portions of this private shoreline.

As identified above, TVA originally purchased approximately 6,772 acres of land in fee; approximately 983 acres of flowage easements; and approximately 12 acres of highway easements for Nickajack Reservoir. Some of this land had been sold or transferred. However, any structures placed within existing flowage easements or within the 500-year floodplain are subject to Section 26a of the TVA Act. Section 26a of the TVA Act requires that TVA's approval be obtained prior to the construction, operation, or maintenance of any dam, appurtenant works, or other obstruction affecting navigation, flood control, or public lands or reservations along or in the Tennessee River or any of its tributaries.

TVA public land on the Nickajack Reservoir contains 739.3 acres of identified prime farmland (Table 2-1). Prime farmland has soil with the best combination of physical and chemical characteristics for producing food and fiber and is protected from conversion to industrial and nonagricultural uses by the United States Department of Agriculture (USDA). It is noted, however, that current soil mapping of prime farmland soils does not account for existing developed uses that may have previously disturbed and potentially converted prime farmland. No land of statewide importance designation occurs around the Nickajack Reservoir.

Table 2-1. Prime Farmland and Farmland of Statewide Importance on Nickajack Reservoir

Zone	Prime Farmland (acres)
Zone 2 – Project Operations	483.3
Zone 3 – Sensitive Resource Management	74.0
Zone 4 – Natural Resource Conservation	110.1
Zone 5 – Industrial	14.8
Zone 6 – Developed Recreation	56.5
Zone 7 – Shoreline Access	0.7
Total	**739.3**

Source: USDA NRCS 2016

The majority (483.3 acres) of prime farmland occurs in lands proposed for designation to Zone 2 (Operations), where major soil disturbance could occur when TVA or other public facilities are constructed. However, most parcels designated for Zone 2 already contain facilities that are not likely to require substantial modification. Only 184.1 acres occurs on land proposed as Zones 3 and 4 (Sensitive Resource Management and Natural Resource Conservation, respectively), which by their function, would have little or no soil disturbance. Of the 56.5 acres of prime farmland included on property proposed for allocation to Zone 6 (Developed Recreation), major soil disturbances could occur in specific locations, if recreation facilities are constructed. Conversely, large areas could remain unaffected for more dispersed recreation management. The least amount of prime farmland (0.7 acre) occurs on property proposed for allocation to Zone 7 (Shoreline Access).

For more information on land use and prime farmland resources and the potential impacts of the draft RLMP, see Volume I, Sections 3.2 and 3.3.

2.2.2 Recreation

TVA provides public lands for developed and dispersed recreational purposes through the reservoir lands planning process. Developed recreation include campgrounds, lodges, marinas, boat ramps, parks, swimming pools and beaches and golf courses. Dispersed recreation activities include picnicking, primitive camping, hiking, bank fishing, hunting, kayaking and canoeing. In 2005, TVA developed a recreation strategic plan aimed at collaboratively enhancing recreational opportunities and addressing unmet recreational needs while managing the resources of the Tennessee River system (TVA 2005). This strategy laid out guiding principles for how to best design and develop recreation opportunities. During this reservoir lands planning effort, tracts of TVA-managed lands around Nickajack Reservoir were categorized based upon a suitable use that is consistent with TVA policy and guidelines and applicable laws and regulations.

On Nickajack Reservoir, developed recreation provides modern facilities and amenities such as campgrounds, developed boat launches/ramps, parks and a myriad of day use facilities (picnic areas, swimming beaches, and fishing piers). These uses primarily occur on TVA lands allocated to Zone 6 (Developed Recreation) and Zone 2 (Project Operations). Under the draft RLMP (Alternative B), approximately 3 percent (89.5 acres) of TVA land on Nickajack Reservoir would be allocated to Zone 6 and approximately 17 percent (619.8 acres) would be allocated to Zone 2.

Nickajack Reservoir is a major outdoor recreation resource that attracts visitors from within and outside the region. Recreation-related attributes of Nickajack Reservoir include wide expanses of water on the lower end of the reservoir and the unique scenery of the upper end as the reservoir passes through the Tennessee River Gorge. A total of 13 parcels contain 24 developed recreation areas on the Nickajack Reservoir including public parks, camping, boat ramps, marinas, fishing piers, trails and a golf course. Many of these recreation areas are located on properties that TVA transferred, leased or licensed for recreation development and use. Several public parks developed on lands made available by TVA include the Marion County Park located on the lower portion of the lake and the City of New Hope's Maple View Public Recreation Area. The 43-acre Marion County Park includes boat ramp, picnic shelter, swimming area and a fishing pier. The 12.4-acre Maple View Public Recreation Area contains a boat ramp, swimming beach, picnic facilities, walking trail and a viewing platform that overlooks the entrance to Nickajack Cave.

Table 2-2 itemizes developed recreation area lands that are managed by TVA or another public agency for recreation purposes. Table 2-3 summarizes commercial, private, and semi-private developed recreation areas. Tables 2-2 and 2-3 do not itemize recreation areas on non-TVA shorelands (Zone 1) because these areas are beyond the scope of this draft RLMP. Nickajack Reservoir parcel descriptions (see Chapter 4) further describe the management entity and management descriptions of recreation facilities on lands managed by either TVA or under contractual agreement.

Table 2-2. Developed Public Recreation Areas on TVA Lands on Nickajack Reservoir

Recreation Area	Managing Entity	Parcel Location
Nickajack Dam Reservation	TVA	1
Shellmound Day Use Area	TVA	2
Marion County Park	Marion County	8
Boat Ramp	State of Tennessee	12
Boat Ramp	State of Tennessee	14
Boat Ramp and Fishing Pier	TVA	19
Boat Ramp and Fishing Pier	TVA	20
Boat Ramp	TVA	24
Boat Ramp	TVA	35
Maple View Public Recreation Area	City of New Hope	37

Table 2-3. Developed Commercial, Private and Semi-Private (camps) Recreation Areas on TVA Lands on the Nickajack Reservoir

Recreation Area	Managing Entity	Parcel Location
Shellmound Campground	Commercial	2
Hales Bar Dam and Marina	Commercial	24
Boat Ramp, Picnic, Fuel Sales, Shipstore	Commercial	29

Some of the TVA lands around Nickajack Reservoir provide excellent opportunities for dispersed or nature-based recreation activities. Dispersed recreation could occur on lands allocated to Zone 2 (Project Operations) and undeveloped areas allocated Zone 6 (Developed Recreation) as well as on land allocated to Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation). For example, on lands allocated to Zone 2 (Project Operations) dispersed recreation activities include hiking, wildlife observation and bank fishing

on undeveloped areas while on Zone 4 (Natural Resource Conservation) dispersed recreation activities include hunting, wildlife observation and bank fishing.

For more information on recreation resources and the potential impacts of the draft RLMP, see Volume I, Section 3.4.

2.2.3 Terrestrial Ecology

Nickajack Reservoir lies within the Southwestern Appalachians and Ridge and Valley ecoregions (U.S. Environmental Protection Agency 2013). The Southwestern Appalachians ecoregion consists of open low mountains with some areas containing steep slopes. Approximately three-fourths of the ecoregion is covered by forest, primarily mixed oak communities and shortleaf pines. Agricultural lands are found on lower slopes and valley floors. The variety of landforms, soils, climate, and geology across the Southwestern Appalachians ecoregion have allowed for an extremely diverse assemblage of animals, including migratory birds of conservation concern. (U.S. Geologic Survey [USGS] 2016). Table 2-4 contains a summary of the land cover within and in the vicinity of Nickajack Reservoir.

Table 2-4. Land Cover on TVA Owned Parcels and within the Vicinity of Nickajack Reservoir

	TVA Property		Vicinity (5-Mile Radius)	
Land Cover Type	**Acres[1]**	**Percent Cover (%)**	**Acres[1]**	**Percent Cover (%)**
Barren Land	14.4	0.4	589.4	0.2
Developed		0.0		0.0
Developed, High Intensity	5.1	0.1	6,622.3	2.1
Developed, Medium Intensity	37.4	1.0	11,199.2	3.6
Developed, Low Intensity	165.1	4.6	27,479.4	8.9
Developed, Open Space	317.3	8.8	42,720.7	13.9
Forest		0.0		0.0
Deciduous Forest	1,600.2	44.4	125,395.4	40.7
Evergreen Forest	301.2	8.4	12,022.4	3.9
Mixed Forest	656.9	18.2	21,019.7	6.8
Shrubland		0.0		0.0
Shrub/Scrub	112.1	3.1	7,558.0	2.5
Herbaceous		0.0		0.0
Grassland/Herbaceous	49.3	1.4	4,271.10	1.4
Hay/Pasture	105.1	2.9	24,564.83	8.0
Planted/Cultivated		0.0		0.0
Cultivated Crops	86.3	2.4	4,162.8	1.4
Wetlands/Open Water	0.0	0.0	0.0	0.0
Woody Wetlands	46.5	1.3	3,390.7	1.1
Emergent Herbaceous	5.5	0.2	328.5	0.1

Land Cover Type	TVA Property		Vicinity (5-Mile Radius)	
	Acres[1]	Percent Cover (%)	Acres[1]	Percent Cover (%)
Wetlands				
Open Water	102.4	2.8	16,833.0	5.5
Total	**3,604.8**	100.0	**308,157.3**	100.0

[1] Source: Homer et al. 2015

Oak-hickory deciduous forest is the most abundant forest type in the eastern U.S. and is prevalent in the Nickajack Reservoir region. Some mixed deciduous-evergreen and evergreen forests are also present in this region. Numerous bird species nest in deciduous forests. Typical species include wild turkey, whip-poor-will, ruby-throated hummingbird, red-eyed vireo, black-throated green warbler, black-and-white warbler, ovenbird, hooded warbler, and the scarlet tanager. Several additional migratory bird species of concern utilize these habitats in this area including black-billed cuckoo, cerulean warbler, chuck-will's widow, Kentucky warbler, peregrine falcon, red-headed woodpecker, wood thrush and worm-eating warbler (USFWS 2016a). Common mammal species of deciduous forests include white-tailed deer, red bat, eastern chipmunk, eastern gray and southern flying squirrels, white-footed mouse, woodland voles, short-tailed shrew, gray fox, and bobcat.

Deciduous forests and mixed evergreen-deciduous forests account for 63 percent of the land cover within the Nickajack Reservoir parcels (see Table 2-4). Evergreen forests make up an additional 8 percent of the land cover. Seeps, streams, and temporary ponds in deciduous forests provide habitat for numerous amphibians including American and Fowler's toads, green frog, northern cricket frog, and other frogs, and a range of salamanders including spotted and mole salamanders. Reptiles commonly found in deciduous forests especially near water include eastern fence lizard, ground skink, five-lined skink, eastern box turtle, eastern wormsnake, black racer, and ring-necked snake. The riparian zones along streams within deciduous forests provide nesting habitat for Acadian flycatchers, northern parula, and some migratory species of concern in this area, the Louisiana waterthrush, prothonotary warbler, and willow flycatcher (USFWS 2016a).

Evergreen and mixed evergreen-deciduous forests provide nesting for woodland birds including pine and yellow-throated warblers, great crested flycatcher, and chuck-will's-widow. Several additional migratory bird species of concern utilize these habitats including black-billed cuckoo, brown-headed nuthatch, chuck-will's widow, Kentucky warbler, fox sparrow, and prairie warbler (USFWS 2016a). Portions of this forest type have been damaged by southern pine beetles in

recent years. Several stands of dead pines exist on TVA lands, and TVA has performed salvage harvests in some stands. Dead pines provide foraging sites for woodpeckers and roosting sites for little brown and silver-haired bats. Other animals that inhabit evergreen and evergreen-deciduous forests but are not restricted to them include white-tailed deer, wild turkey, black bear, eastern mole, southern bog lemming, eastern kingsnake, smooth earthsnake, eastern fence lizard, six-lined racerunner, and a variety of salamanders, frogs, and toads, especially near wet areas.

Most of the TVA lands consist of narrow strips or small blocks of forest. Many of these lands are adjacent to larger contiguous forest blocks contributing habitat to area-sensitive species of wildlife that favor interior woodland habitats. Many of these adjacent lands were formerly owned by TVA and transferred to other federal agencies such as the U.S. Forest Service and the National Park Service, and to state agencies. These lands combined with the TVA lands to form large blocks of forested habitat adjacent to the reservoir.

Nonforested herbaceous community types in the Nickajack Reservoir region are dominated by pasturelands and hayfields. Herbaceous habitats, including grasslands, barrens, hayfields, and pastures account for approximately 4 percent of the landcover on the reservoir parcels (Table 2-4). Early successional habitats provide habitat for a variety of bird species including eastern bluebird, eastern meadowlark, American crow, and red-tailed hawk. Several additional migratory bird species of concern utilize these habitats in this area including dickcissel, short-eared owl, and willow flycatcher (USFWS 2016a). Amphibians and reptiles that use these habitats include spring peeper, chorus frog, and common garter snake.

Bird and mammal diversity greatly increases at edge habitats especially those between forested areas bordered by early successional habitats. Birds commonly found at these edge habitats include wild turkey, great crested flycatcher, white-eyed vireo, Carolina wren, blue-gray gnatcatcher, brown thrasher, common yellowthroat, yellow-breasted chat, indigo bunting, eastern towhee, field and song sparrow, and orchard oriole. Several additional migratory bird species of concern utilize these habitats in this area including blue-winged warbler, dickcissel, loggerhead shrike, peregrine falcon, red-headed woodpecker, and willow flycatcher (USFWS 2016a). Mammals typically inhabiting edges include eastern cottontail, red fox, coyote, long-tailed weasel, and striped skunk.

The reservoir parcels provide wetlands, including wooded swamps and open water habitats, and associated riparian zones that are used by a variety of wildlife. Common species include great blue heron, green heron, belted kingfisher, common yellowthroat, and northern parula. Many additional migratory bird species of concern utilize these habitats in this area including bald eagle, Louisiana waterthrush, prothonotary warbler, rusty blackbird, short-eared owl, and willow flycatcher (USFWS 2016a). A total of 10 colonial nesting bird colonies/heronries have been observed on TVA parcels on Nickajack Reservoir (TVA 2016a). Shallow embayments, especially those with emergent vegetation, provide foraging habitat for waterfowl. Common waterfowl include wood ducks, Canada geese, and mallards. Other waterfowl present include American black duck, gadwall, green-winged teal, ring-necked duck, lesser scaup, common goldeneye, bufflehead, and hooded merganser.

Shorebird use of the Nickajack Reservoir is limited to shallow embayments and exposed mud flats. Species such as spotted sandpiper that forage along the margins of reservoirs and killdeer that are not restricted to foraging on mud flats are commonly observed. Common amphibians found in the riparian zones include green frog, eastern narrowmouth toad, and Fowler's toad. Reptiles include northern water snake, common snapping turtle, and painted turtles. Common mammals include mink, muskrat, raccoon, and American beaver.

A search of the TVA Natural Heritage database in May 2016 indicated that 64 caves are located within 3 miles of Nickajack Reservoir. Seven caves are located on TVA parcels (TVA 2016a).

For information on terrestrial ecology and potential impacts of the draft RLMP, see Volume I, Section 3.5.

2.2.3.1 Invasive Nonnative Species

Many of the planned TVA parcels around Nickajack Reservoir contain a substantial amount of invasive nonnative species. Executive Order (EO) 13112 defines an invasive nonnative species as any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem; and whose introduction does or is likely to cause economic or environmental harm or harm to human health.

Based on a data search conducted on the USDA Natural Resources Conservation Service (NRCS) PLANTS Database (USDA NRCS 2016b) hydrilla (*Hydrilla verticillata*) is the only plant included on the Federal Noxious Weed List of 2010 reported from the two counties encompassing Nickajack Reservoir.

In addition, Southeastern Exotic Plant Pest Council provides a list of nonnative invasive species that could pose potential threats to native ecosystems and human health for each southeastern state. In reviewing the Tennessee exotic plant pest list (Tennessee Exotic Plant Pest Council 2009), there were 26 species occurring in Tennessee that pose a severe threat to native ecosystems observed in the Nickajack Reservoir region (Table 2-5).

Table 2-5. Invasive Non-native Plant Species that Pose a Severe Threat Known to Occur in Tennessee

Common Name	Scientific Name
Asian bittersweet	*Celastrus orbiculatus*
Autumn olive	*Elaeagnus umbellata var. parviflora*
Cheat grass	*Bromus tectorum*
Chinese privet	*Ligustrum sinense*
Chinese yam	*Dioscorea oppositifolia*
Common privet	*Ligustrum vulgare*
Common St. John's-wort	*Hypericum perforatum*
Hydrilla	*Hydrilla verticillata*
Japanese honeysuckle	*Lonicera japonica*
Japanese knotweed	*Polygonum cuspidatum*
Japanese stiltgrass	*Microstegium vimineum*
Johnson grass	*Sorghum halepense*
Korean clover	*Kummerowia stipulacea*
Kudzu	*Pueraria montana* var. *lobata*
Mimosa	*Albizia julibrissin*
Multiflora rose	*Rosa multiflora*
Princess tree	*Paulownia tomentosa*
Purple loosestrife	*Lythrum salicaria*
Sericia lespedeza	*Lespedeza cuneata*
Shrubby bushclover	*Lespedeza bicolor*
Tree of heaven	*Ailanthus altissima*

Source: Tennessee Exotic Plant Pest Council 2009

All of these species have the potential to adversely impact the native plant communities because of their potential to spread rapidly and displace native vegetation. TVA considers all of the species a severe threat to local plant communities.

In addition to invasive or non-native plant species discussed above, there are several exotic, non-native, and/or pest insect species and plant diseases that are known to occur within the

counties encompassing Nickajack Reservoir. These insects and diseases can have devastating impacts on native plant communities and human crops/fruits. The insects include: Japanese beetle (*Popillia japonica),* hemlock wooly adelgid (*Adelges tsugae*), emerald ash borer (*Agrilus planipennis*), brown marmorated stink bug (*Halyomorpha halys*), kudzu bug (*Megacopta cribraria*), and southern pine beetle (*Dendroctonus frontalis*) (EDDMapS 2016). These species all have the potential to pose problems to native vegetation, wildlife, crops, landscaping and gardens, and/or overall ecosystems due to the lack of natural predators or diseases to help control their populations giving them the ability to out-compete native species.

The following plant diseases are also known to occur in the counties containing Nickajack Reservoir: butternut canker (*Sirococcus clavigignenti-juglandacearum*), dogwood anthracnose (*Discula destructive*), Heterobasidion root rots (*Heterobasidion* spp.), and oak wilt (*Ceratocystis fagacearum*). Most of these diseases target certain plant species or groups of species, and can have serious impacts to local populations of those plants and trees.

There are several exotic, non-native, and/or pest terrestrial wildlife and other insect species that are known to occur within the region. These include: Asian tiger mosquito (*Aedes albopictus*), feral cat (Felis catus), and European starling (*Sturnus vulgaris*) (EDDMapS 2016). These species have the potential to pose problems to native wildlife and ecosystems due to their ability to out-compete native species and spread quickly. Some of these species can pose threats to human health and safety. Asian tiger mosquitoes are known to transmit various diseases to humans.

2.2.4 Aquatic Ecology

Unimpounded rivers of the Ridge and Valley Ecoregion typically consist of limestone rubble and bedrock riffles, sandy silty pools, and some extensive sand and gravel shoals (Etnier and Starnes 1993). These conditions exist in upper reaches of reservoirs where free-flowing streams transition into impounded reservoirs as well as in reservoir tailwaters. River-like qualities still exist in the upper reaches of some of the impoundments, including Nickajack, although there are no longer any of the expansive rocky or gravel shoal areas that once abounded in the Tennessee River.

Aquatic ecological conditions in streams and reservoirs are monitored under a number of TVA programs. Aquatic ecological conditions in the larger reservoirs have been monitored using the Reservoir Vital Signs Monitoring Program (RVSMP), which focuses on (1) physical and chemical characteristics of waters; (2) physical and chemical characteristics of sediments;

(3) sampling the benthic macroinvertebrate community; and (4) fish assemblage sampling. The RVSMP data include annual fish sampling on tributary reservoirs on a two-year rotation sampling cycle. Ratings are based primarily on fish community structure and function, using an analysis tool known as the Reservoir Fish Assemblage Index (RFAI) (McDonough and Hickman 1999).

Both RFAI and benthic community samples were taken in the forebay area (near the dam) and inflow zone of Nickajack Reservoir (Table 2-6). Nickajack has consistently scored among the highest of all the reservoirs monitored by TVA because it is a small, narrow reservoir with a short retention time. It usually takes only three or four days for water to flow through the reservoir, which helps keep the water mixed and flowing consistently, preventing it from stratifying (separating into layers of different temperatures) during the summer. This allows oxygen in the lower water column to be replenished and limits algal growth, thereby reducing chlorophyll concentrations. Historically, ecological health scores have fluctuated within the good range.

Table 2-6. RFAI and Benthic Community Scores for Nickajack Reservoir (2011-2015)

Year	RFAI Scores		Benthic Community Scores	
	Forebay	Inflow	Forebay	Inflow
2011	Fair	Fair	Fair	Good
2013	Fair	Good	Good	Good
2015	Fair	Good	Good	Good

Source: TVA 2016b

In the most recent samples, the fish community rated fair at the forebay and good at the inflow. Consistent with previous years, fewer fish and fish species were collected at the forebay than expected and a greater proportion of those were more tolerant of poorer water quality conditions. The fish community has rated good at the inflow all years except 2011, when it scored fair. The fish species collected during the RVSMP sampling efforts represent typical species found in large river and lentic habitats (Table 2-7).

Table 2-7. Fish Species in Nickajack Reservoir

Common Name	Scientific Name
Black crappie	*Pomoxis nigromaculatus*
Black redhorse	*Moxostoma duquesnei*
Blacktail shiner	*Cyprinella venusta*
Blue catfish	*Ictalurus furcatus*
Bluegill	*Lepomis macrochirus*

Common Name	Scientific Name
Bluntnose minnow	*Pimephales notatus*
Brook silverside	*Labidesthes sicculus*
Channel catfish	*Ictalurus punctatus*
Chestnut lamprey	*Ichthyomyzon castaneus*
Common carp	*Cyprinus carpio*
Flathead catfish	*Pylodictis olivaris*
Freshwater drum	*Aplodinotus grunniens*
Gizzard shad	*Dorosoma cepedianum*
Golden redhorse	*Moxostoma erythrurum*
Golden shiner	*Notemigonus crysoleucas*
Green sunfish	*Lepomis cyanellus*
Largemouth bass	*Micropterus salmoides*
Largescale stoneroller	*Campostoma oligolepis*
Logperch	*Percina caprodes*
Longear sunfish	*Lepomis megalotis*
Longnose gar	*Lepisosteus osseus*
Mississippi silverside	*Menidia audens*
Northern hog sucker	*Hypentelium nigricans*
Redbreast sunfish	*Lepomis auritus*
Redear sunfish	*Lepomis microlophus*
Rock bass	*Ambloplites rupestris*
Sauger	*Stizostedion canadense*
Skipjack herring	*Alosa chrysochloris*
Smallmouth bass	*Micropterus dolomieu*
Smallmouth buffalo	*Ictiobus bubalus*
Spotfin shiner	*Cyprinella spiloptera*
Spotted bass	*Micropterus punctulatus*
Spotted gar	*Lepisosteus oculatus*
Spotted sucker	*Minytrema melanops*
Spotted sunfish	*Lepomis punctatus*
Striped bass	*Morone saxatilis*
Threadfin shad	*Dorosoma petenense*
Warmouth	*Lepomis gulosus*
Western mosquitofish	*Gambusia affinis*
White bass	*Morone chrysops*
White crappie	*Pomoxis annularis*
Yellow bass	*Morone mississippiensis*
Yellow perch	*Perca flavescens*

Source: TVA 2016c

As in most previous years, bottom life rated good at both monitoring locations. Typically a "good" variety of organisms are found, including long-lived and sensitive organisms — such as snails and mayflies that are indicative of good water quality and conditions that allow for long-term survival.

2.2.4.1 Invasive Nonnative Aquatic Species

Although there are many exotic or introduced aquatic species within the region, there are a few species that are considered more detrimental due to their ability to have broad impacts to overall aquatic systems as well as direct impacts to humans. These include Asian carp, especially bighead carp (*Hypophthalmichthys nobilis*) and silver carp (*Hypophthalmichthys molitrix*) (EDDMapS 2016), and zebra mussels (*Dreissena polymorpha*).

Asian carp cause serious damage to the native fish populations in the lakes and rivers that they infest because they out-compete other fish for food and space. Carp are also thought to lower water quality, which can kill off sensitive organisms like native freshwater mussels. Asian carp have been known to dominate entire streams, effectively pushing out the native species. Asian carp are also known to pose danger to humans due to their habit of jumping out of the water and striking boaters and water skiers and damaging boats and equipment.

Zebra mussels are notorious for their biofouling capabilities by colonizing water supply pipes of hydroelectric and nuclear power plants, public water supply plants, and industrial facilities. They colonize pipes constricting flow, therefore reducing the intake in heat exchangers, condensers, firefighting equipment, and air conditioning and cooling systems. Navigational and recreational boating can be affected by increased drag due to attached mussels. Small mussels can get into engine cooling systems causing overheating and damage. Navigational buoys have been sunk under the weight of attached zebra mussels. Zebra mussels can have profound effects on the ecosystems they invade. They primarily consume phytoplankton, but other suspended material is filtered from the water column including bacteria, protozoans, zebra mussel veligers, other microzooplankton and silt (Benson et al. 2016).

For information on aquatic ecology and potential impacts of the draft RLMP, see Volume I, Section 3.6.

2.2.5 Threatened and Endangered Species

TVA biologists and natural resource specialists used the TVA Natural Heritage database to assess the endangered and threatened species within and around the Nickajack Reservoir. The

TVA Natural Heritage database was created to ensure that environmental compliance activities are conducted in a consistent manner across the TVA Region and that these activities meet the requirements of the National Environmental Policy Act (NEPA) and the Endangered Species Act. Federally and state-listed species identified from the TVA Natural Heritage database searches that are known to occur in the two counties in which Nickajack Reservoir lies within are presented in Table 2-8. For the purpose of this document state-listed species include those that are being tracked, in need of management, candidates, proposed for listing and of special concern. As noted below, there is one federally listed plant species and nine state-listed plants species known to occur on TVA parcels on Nickajack Reservoir. There are seven terrestrial wildlife species known to occur on TVA parcels, however, suitable habitat is present for many of the other listed species. Two listed aquatic species are known to occur within TVA parcels, and nine are known to occur in the reservoir adjacent to the parcels.

Table 2-8. Federally and State-Listed Species in the Nickajack Reservoir Counties

Common Name	Scientific Name	Status	
		Federal	State
Amphibian			
Barking treefrog	*Hyla gratiosa*		D (S3)
Four-toed salamander	*Hemidactylium scutatum*		D(S3)
Hellbender	*Cryptobranchus alleganiensis*	PS	D (S3)
Tennessee cave salamander	*Gyrinophilus palleucus*		T (S2)
Birds			
Bachman's sparrow	*Peucaea aestivalis*	--	E (S1B)
Bald eagle	*Haliaeetus leucocephalus*	DM	D (S3)
Cerulean warbler	*Setophaga cerulean*	--	D (S3B)
Common barn-owl	*Tyto alba*	--	D (S3)
Common raven	*Corvus corax*	--	T (S2)
Golden-winged warbler	*Vermivora chrysoptera*	--	D (S3B)
Great egret	*Ardea alba*	--	D (S2B:S3N)
King rail	*Rallus elegans*	--	D (S2)
Least bittern	*Ixobrychus exilis*	--	D (S2B)
Peregrine falcon	*Falco peregrinus*	PS:LE	E (S1B)
Sharp-shinned hawk	*Accipiter striatus*	PS	D (S3B:S4N)
Swainson's warbler	*Limnothlypis swainsonii*	--	D (S3)
Virginia rail	*Rallus limicola*	--	TRKD (S1B:S3N)
Crustacean			
Chickamauga crayfish	*Cambarus extraneus*	--	T (S1S2)
Nickajack cave isopod	*Caecidotea nickajackensis*	--	TRKD (S1)
Nortons cave amphipod	*Stygobromus nortoni*	--	HIST

Common Name	Scientific Name	Status	
		Federal	State
Fish			
Flame chub	*Hemitremia flammea*	--	D (S3)
Golden darter	*Etheostoma denoncourti*	--	D (S2)
Highfin carpsucker	*Carpiodes velifer*	--	D (S2S3)
Snail darter	*Percina tanasi*	LT	T (S2S3)
Southern cavefish	*Typhlichthys subterraneus*	--	D (S3)
Tennessee dace	*Chrosomus tennesseensis*	--	D (S3)
Gastropod			
Anthony's riversnail	*Athearnia anthonyi*	LE	E (S1)
Armored rocksnail	*Lithasia armigera*	--	TRKD (S1S2)
Corpulent hornsnail	*Pleurocera corpulenta*	--	TRKD (S1)
Ornate rocksnail	*Lithasia geniculata*	--	TRKD (S2)
Royal marstonia	*Pyrgulopsis ogmorhaphe*	LE	D (S1)
Smooth mudalia	*Leptoxis virgata*	--	TRKD (S1)
Spiny riversnail	*Io fluvialis*	--	TRKD (S2)
Warty rocksnail	*Lithasia lima*	--	TRKD (S2)
Insect			
Blowing cave beetle	*Pseudanophthalmus ventus*	--	TRKD (S1)
Nickajack cave beetle	*Pseudanophthalmus nickajackensis*	--	TRKD (S1)
Sequatchie caddisfly	*Glyphopsyche sequatchie*	C	TRKD (S1)
Mammal			
Allegheny woodrat	*Neotoma magister*	--	D (S3)
Common shrew	*Sorex cinereus*	--	D (S4)
Eastern small-footed bat	*Myotis leibii*	--	D (S2S3)
Gray bat	*Myotis grisescens*	LE	E (S2)
Indiana bat	*Myotis sodalis*	LE	E (S1)
Northern long-eared bat	*Myotis septentrionalis*	LT	-- (S1S2)
Rafinesque's big-eared bat	*Corynorhinus rafinesquii*	--	D (S3)
Smoky shrew	*Sorex fumeus*	--	D (S4)
Southeastern shrew	*Sorex longirostris*	--	D (S4)
Mussel			
Cumberland monkeyface	*Quadrula intermedia*	LE	E (S1)
Dromedary pearlymussel	*Dromus dromas*	LE	E (S1)
Fanshell	*Cyprogenia stegaria*	LE	E (S1)
Orange-foot pimpleback	*Plethobasus cooperianus*	LE	E (S1)
Pale lilliput	*Toxolasma cylindrellus*	LE	E (S1)
Pink mucket	*Lampsilis abrupta*	LE	E (S2)
Rough pigtoe	*Pleurobema plenum*	LE	E (S1)
Spectaclecase	*Cumberlandia monodonta*	LE	TRKD (S2S3)
Tuberculed blossom pearlymussel	*Epioblasma torulosa*	LE	EXTI (SX)

Common Name	Scientific Name	Status	
		Federal	State
Reptile			
Eastern slender glass lizard	*Ophisaurus attenuatus longicaudus*	--	D (S3)
Northern pine snake	*Pituophis melanoleucus*	--	T (S3)
Plant			
A liverwort	*Pellia appalachiana*	--	SPCO (S2)
American chestnut	*Castanea dentata*	--	SPCO (S2S3)
American ginseng	*Panax quinquefolius*	--	S-CE (S3S4)
American hart's-tongue fern	*Asplenium scolopendrium* var. *americanum*	LT	E (S1)
American smoke-tree	*Cotinus obovatus*	--	SPCO (S2)
Beakrush	*Rhynchospora perplexa*	--	T (S2)
Blomquist leafy liverwort	*Lejeunea blomquistii*	--	SPCO (S1S2)
Bog oat-grass	*Danthonia epilis*	--	SPCO (S1S2)
Butternut	*Juglans cinerea*	--	T (S3)
Compass-plant	*Silphium laciniatum*	--	T (S2)
Creekgrass	*Potamogeton epihydrus*	--	SPCO (S1S2)
Creeping St. John's-wort	*Hypericum adpressum*	--	E (S1)
Cumberland rosinweed	*Silphium brachiatum*	--	E (S3)
Eggert's sunflower	*Helianthus eggertii*	--	SPCO (S3)
Fame-flower	*Phemeranthus mengesii*	--	T (S2)
Featherfoil	*Hottonia inflata*	--	SPCO (S2)
Florida hedge-hyssop	*Gratiola floridana*	--	E (S1)
Fragrant bedstraw	*Galium uniflorum*	--	SPCO (S1)
Fraser loosestrife	*Lysimachia fraseri*	--	E (S2)
Gibbous panic-grass	*Sacciolepis striata*	--	SPCO (S1)
Granite gooseberry	*Ribes curvatum*	--	T (S1)
Great plains ladies'-tresses	*Spiranthes magnicamporum*	--	E (S1)
Hairy false gromwell	*Onosmodium hispidissimum*	--	E (S1)
John Beck's leafcup	*Polymnia johnbeckii*	--	E (S1)
Lance-leaf trillium	*Trillium lancifolium*	--	E (S1)
Large-flowered skullcap	*Scutellaria montana*	LT	T (S4)
Late goldenrod	*Solidago tarda*	--	SPCO (SH)
Leather-flower	*Clematis glaucophylla*	--	E (S1)
Limestone fame-flower	*Phemeranthus calcaricus*	--	SPCO (S3)
Liverwort	*Metzgeria uncigera*	--	SPCO (S1)
Manna-grass	*Glyceria acutiflora*	--	SPCO (S2)
Mountain bittercress	*Cardamine clematitis*	--	T (S2)
Mountain bush-honeysuckle	*Diervilla sessilifolia* var. *rivularis*	--	T (S2)
Mountain honeysuckle	*Lonicera dioica*	--	SPCO (S2)
Naked-stem sunflower	*Helianthus occidentalis*	--	SPCO (S2)
Nestronia	*Nestronia umbellula*	--	E (S1)

Common Name	Scientific Name	Status	
		Federal	State
Nevius' stonecrop	*Sedum nevii*	--	E (S1)
Northern bush-honeysuckle	*Diervilla lonicera*	--	T (S2)
Ovate catchfly	*Silene ovata*	--	E (S2)
Ovate-leaved arrowhead	*Sagittaria platyphylla*	--	SPCO (S2S3)
Palamocladium	*Palamocladium leskeoides*	--	T (S1)
Pale corydalis	*Corydalis sempervirens*	--	E (S1S2)
Prairie-dock	*Silphium pinnatifidum*	--	T (S2)
Price's potato-bean	*Apios priceana*	LT	E (S3)
Rose-gentian	*Sabatia capitata*	--	E (S2)
Roundleaf fameflower	*Phemeranthus teretifolius*	--	T (S2)
Roundleaf serviceberry	*Amelanchier sanguinea*	--	T (S2)
Sharp's lejeunea	*Lejeunea sharpii*	--	E (S1S2)
Silverling	*Paronychia argyrocoma*	--	T (S1S2)
Slender blazing-star	*Liatris cylindracea*	--	T (S2)
Small whorled pogonia	*Isotria medeoloides*	LT	E (S1)
Small's stonecrop	*Diamorpha smallii*	--	E (S1S2)
Soft-haired thermopsis	*Thermopsis mollis*	--	SPCO (S2S3)
Southern nodding trillium	*Trillium rugelii*	--	E (S2)
Southern morning-glory	*Stylisma humistrata*	--	T (S1)
Spreading false-foxglove	*Aureolaria patula*	--	SPCO (S3)
Spreading rockcress	*Arabis patens*	--	E (S1)
Virginia chainfern	*Woodwardia virginica*	--	SPCO (S2)
Virginia spiraea	*Spiraea virginiana*	LT	E (S2)
White fringeless orchid	*Platanthera integrilabia*	THR	E (S2S3)
Witch-alder	*Fothergilla major*	--	T (S2)
Wood lily	*Lilium philadelphicum*	--	E (S1)
Yellow honeysuckle	*Lonicera flava*	--	T (S1)
Yellow jessamine	*Gelsemium sempervirens*	--	SPCO (S1S2)

***Federal status abbreviations**: LE = Listed endangered, LT = Listed threatened; PS = Partial status; C = Candidate; DM = Recovered, delisted, and being monitored

State status abbreviations: E = Endangered; T = Threatened; D = In need of management; NOST = No status; PROT= Protected; SPCO= Special concern; TRKD = Tracked by state natural heritage program; S-CE = Special Concern - Commercially Exploited

State rank abbreviations: S1 = Critically imperiled, often with five or fewer occurrences, S2 =Imperiled, often with <20 occurrences; S3 = Rare or uncommon, often with <80 occurrences; S4 = Widespread, abundant, and apparently secure within the state, but with cause for long-term concern; SX = Believed to be extirpated from the state; SH = Of historical occurrence in Tennessee, e.g. formally part of the established biota, with the expectation that it may be rediscovered; S#S# = Denotes a range of ranks because the exact rarity of the element is uncertain (e.g., S1S2) ; S? = Unranked at this time or rank uncertain; _B = Breeds in Tennessee; N = Non-breeding population in Tennessee

Source: TVA 2016a

In order to determine which of the species listed in each county are known to occur in the general vicinity of the reservoir, a more refined database search was conducted. Database searches are based on the following criteria: (1) distance, (2) element occurrence rank values, and (3) species or type of element present. Accordingly, plants are assessed within a 5-mile radius, aquatic species within 10-mile radius, and terrestrial species within a 3-mile radius.

For information on threatened and endangered species and the potential impacts of the draft RLMP, see Volume I, Section 3.7.

2.2.5.1 Plants

Reviews of the TVA Natural Heritage database indicated within the two surrounding counties, there are five federally listed threatened species, one proposed threatened species, and one delisted species. Of these species, four species, large-flowered skullcap, small whorled pogonia, Virginia spiraea, and white fringeless orchid, are known to occur within 5 miles of Nickajack Reservoir; however, only the large-flowered skullcap is known to occur on any TVA parcels. There are 58 state-listed species within the surrounding counties. Of these plants, 49 exist within 5 miles of the reservoir and nine have been recorded on TVA parcels. These species and their habitat requirements are discussed in Table 2-9. Of the species known to occur on TVA parcels, the majority occur on parcels proposed for allocation to Zone 3 (Sensitive Resource Management). The large-flowered skullcap, hairy false gromwell, and creeping St John's wort have also been recorded on parcels proposed for allocated to Zone 2 (Project Operations).

Table 2-9. Habitat Requirements for Plant Species of Conservation Concern Within 5 Miles of Nickajack Reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
American ginseng	Rich moist hardwood dominated woods under a closed canopy[1]	Yes
American smoke-tree	Dry, circumneutral soil[2]	Yes Recorded on a TVA Zone 3 Parcel
Bastard toad-flax	Rich prairies, sand prairies, hill prairies, rocky open woodlands, sandy savannahs, barren areas with scrubby vegetation[3]	Limited habitat
Bog oat-grass	Acidic seeps[2]	Limited habitat
Butternut	Rich woods and hollows[2]	Likely
Compass-plant	Barrens[2]	Likely
Creekgrass	Lakes and streams[2]	Yes
Creeping St. John's-wort	Edges of ponds and lakes[2]	Yes Recorded on a TVA Zone 2 Parcel

Common Name	Habitat Requirements	Suitable Habitat Present
Fame-flower	Dry rock ledges[2]	Likely
Featherfoil	Wet sloughs and ditches - aquatic[2]	Likely
Florida hedge-hyssop	Wooded swamps[2]	Likely
Fragrant bedstraw	Dry woods[2]	Likely
Fraser loosestrife	Dry open woods[2]	Likely
Glade cress	Limestone cedar glades[1]	Somewhat likely
Great plains ladies'-tresses	Glades[2]	Yes Recorded on a TVA Zone 3 Parcel
Great yellow wood-sorrel	Woods[2]	Likely
Greek valerian	Moist soils in deciduous woodlands[3]	Likely
Hairy false gromwell	Well drained open areas including fallow fields and pastures[1]	Yes Recorded on TVA Zone 2 3 parcels
John Beck's leafcup	Limestone outcrops[2]	Yes Recorded on a TVA Zone 3 parcel
Lance-leaf trillium	Alluvial woods and moist ravines[2]	Likely
Large whorled pogonia	Acidic soils in dry/mesic forests, seeps, and sphagnum bogs[4]	Somewhat likely
Large-flowered skullcap	Escarpments, dry woods[2]	Yes Recorded on a TVA Zone 2 parcel
Leather-flower	Wooded stream banks[2]	Likely
Limestone fame-flower	Glades[2]	Likely
Manna-grass	Swamps, ponds[2]	Likely
Mohr's rosin-weed	Parries, clearings, fence rows, sandy soils[2]	Somewhat likely
Mountain bittercress	High elevation seeps[2]	Somewhat likely
Mountain bush-honeysuckle	Dry cliffs and bluffs[2]	Likely
Nevius' stonecrop	Rocky bluffs and cliffs[2]	Yes Recorded on a TVA Zone 3 parcel
Northern bush-honeysuckle	Rocky woodlands and bluffs[2]	Likely
Rose-gentian	Dry open woods, powerlines[2]	Likely
Roundleaf catchfly	Exposed rocky cliffs and banks[1]	Likely
Roundleaf fameflower	Dry sandy rock outcrops[2]	Likely
Roundleaf serviceberry	Rocky slopes and riverbanks[2]	Likely
Slender blazing-star	Barrens[2]	Yes Recorded on a TVA Zone 3 parcel
Small whorled pogonia	Mid-elevation dry woods[2]	Somewhat likely
Small's stonecrop	Sandstone outcrops[2]	Likely
Southern nodding trillium	Rich mountain woods[2]	Somewhat likely
Southern morning-glory	Dry piney woods[2]	Somewhat likely
Spreading false-foxglove	Limestone bluffs shaded by oaks - oak root parasite[1]	Likely
Spreading rockcress	Moist rocky woods, limestone outcrops, shady riverbanks[2]	Yes Recorded on a TVA Zone 3 parcel
Svenson's wild-rye	Rocky bluffs[2]	Yes Recorded on a TVA

Common Name	Habitat Requirements	Suitable Habitat Present
		Zone 3 parcel
Tall blue wild indigo	Open areas[5]	Likely
Virginia spiraea	Creek edges, gravel bars, rubble and boulders[1]	Likely
White fringeless orchid	Wet areas in acidic muck or sand - at the head of streams or seepage slopes[1]	Somewhat likely
Witch-alder	Rocky slopes and riverbanks[2]	Likely
Wood lily	Dry openings, powerlines[2]	Likely
Yellow honeysuckle	Rocky woods and thickets[2]	Likely
Yellow jessamine	Dry openings[2]	Likely

[1] Source: NatureServe 2016 [2] Source: TDEC 2014

[3] Source: Hilty 2015 [4] Source: Flora of North America 1993

[5] Source: Lady Bird Johnson Wildflower Center 2013

2.2.5.2 Terrestrial Wildlife

Reviews of the TVA Natural Heritage database indicate that there are seven federally listed and 24 state-listed terrestrial animal species in the two Nickajack Reservoir counties(see Table 2-8). Within 3 miles of the reservoir, there are records of three federally listed species and an additional 17 state-listed species (Table 2-10). Seven of these species have been recorded on TVA parcels. All records of listed terrestrial species on TVA parcels occur on parcels that would be allocated either Zone 3 (Sensitive Resource Management) or Zone 4 (Natural Resource Conservation) parcels. These species and their habitat requirements are described in Table 2-10.

Table 2-10. Habitat Requirements for Terrestrial Wildlife Species of Conservation Concern within 3 Miles of Nickajack Reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
Amphibians		
Barking treefrog	Bottoms, sloughs and swamps along rivers and large creeks[1]	Likely
Green salamander	Damp crevices in shaded rock outcrops, beneath loose bark of dead trees, sometimes under logs[2]	Likely
Hellbender	Creeks and Rivers[2]	Likely
Tennessee cave salamander	Aquatic, cave obligate[2]	Yes Recorded on a TVA Zone 3 parcel
Birds		
Bachman's sparrow	Dry open mature pine forest with grass understory, found clear cuts, fallow fields[2]	Likely
Bald eagle	Forested areas near open water[4]. In TN, overwintering on reservoirs and large rivers[1]	Yes Recorded on a TVA Zone 2 parcel and

Common Name	Habitat Requirements	Suitable Habitat Present
		within 660 feet of a Zone 3 parcel
Cerulean warbler	Mature forest, forested wetlands, and riparian areas[2]	Likely
Common barn-owl	Nesting: cliffs, hollow trees, buildings, open forests Foraging: dense grass fields including marshes[2]	Likely
King rail	Wetlands[2]	Likely
Least bittern	Wetlands[2]	Likely
Peregrine falcon	Nesting: Ledges and opening of cliffs, bluffs, buildings, and occasionally trees. Foraging: Variety of open habitats including wetlands, fields, and lakeshores[2]	Likely
Swainson's warbler	Mature, rich, damp, deciduous floodplain and swamp forests[3]	Likely
Virginia rail	Wetlands[2]	Likely
Insects		
Nickajack cave beetle	Terrestrial cave obligate[3]	Yes Record on a TVA Zone 3 parcel
Mammals		
Allegheny woodrat	Rocky outcrops, cliffs. Usually at higher elevations[2]	Yes Recorded on a TVA Zone 3 parcel
Common shrew	Forests, woodlands, open areas[2]	Somewhat likely
Eastern small-footed bat	Hibernates in caves. Summer roosts include caves, trees, buildings, and other man-made structures[2]	Yes Recorded on a TVA Zone 3 parcel
Gray bat	Caves[2]	Yes Recorded on a TVA Zone 3 parcel
Indiana bat	In winter, hibernacula are found in caves. During summer, roosts are found in wooded or semi wooded areas that have suitable trees with loose bark[2]	Yes Historical record in a TVA Zone 3 parcel
Northern long-eared bat	In winter, hibernacula are found in caves. During summer, roosts are found in wooded or semi wooded areas that have suitable trees with loose bark[2]	Likely

[1] Source: Tennessee Wildlife Resources Agency (TWRA) 2016
[2] Source: NatureServe 2016
[3] Source: TDEC 2014
[4] Source: Kennedy et al. 2013

For information on terrestrial wildlife and potential impacts of the draft RLMP, see Volume I, Section 3.5.4.

2.2.5.2.1 Amphibians

There are four species of federally or state-listed amphibians within 3 miles of Nickajack Reservoir (see Table 2-10). The Tennessee cave salamander has been recorded within a

parcel that would be allocated to Zone 3 (Sensitive Resource Management). Barking treefrog and green salamander have no known records on TVA parcels, however suitable habitat is likely to be found within the parcels. Records of hellbender in the mainstem of the Tennessee River are unlikely since Nickajack Dam was created, however, habitat for this species in tributaries of the Tennessee River is likely.

2.2.5.2.2 Birds

Nine species of listed birds are have been recorded within 3 miles of the reservoir (see Table 2-9). The only records from within TVA parcels are of a nesting pair of bald eagles on a parcel that would be allocated to Zone 2 (Project Operations). This pair and another pair have created many nests around the Nickajack Dam Reservation and one on the reservation property, though the nest fell out of the tree in 2007. New nests were created nearby on private property in later years. Another active nest is known within 660 feet of a TVA parcel proposed to be allocated as Zone 3. This nest is along a TVA transmission line right-of-way (ROW).

Habitat for Bachman's sparrow, cerulean warbler, common barn-owl, king rail, least bittern, peregrine falcon, Swainson's warbler and Virginia rail is likely present in TVA parcels with mature tracts of forest, cliff, bluffs, or wetlands. However, there are no records of sightings within the TVA Natural Heritage database for these species on TVA parcels.

2.2.5.2.3 Insects

The Nickajack cave beetle has been recorded in a cave which is on a parcel proposed for allocation as Zone 3 (Sensitive Resource Management). This species may still be present at this location but survey would be required for confirmation.

2.2.5.2.4 Mammals

Six species of federally or state-listed mammals have been recorded within 3 miles of the reservoir. All of these species, except the common shrew, have been observed within caves. Gray bat and Allegheny woodrat have been recorded in recent years on TVA parcels. Nickjack Cave is a Priority 3 Cave in the Gray Bat Recovery Plan. Nickajack Cave is a large maternity hibernacula and bat populations have been surveyed by TVA since 1976 and surveys have recorded a population of over 100,000 bats in recent years. Records of Indiana bat and eastern small-footed bat in Nickajack Cave are historical. Northern long-eared bat has been documented in a cave 0.25 mile from Nickjack Reservoir. There are 64 caves within 3 miles of the reservoir. Seven of these caves are on TVA parcels and two of these caves have records of bats and other listed wildlife.

For information on terrestrial wildlife and potential impacts of the draft RLMP, see Volume I, Section 3.5.4.

2.2.5.3 Aquatic Species

In the two Nickajack Reservoir counties, there are 12 federally listed aquatic animal species and an additional 16 state-listed species (see Table 2-8). Within 10 miles of the reservoir, there are 54 listed species, 17 of which are federally-listed species (Table 2-11). There are two listed species recorded on TVA parcels and nine listed species that have been recorded within Nickajack Reservoir. In parcels where listed aquatic species have been recorded, TVA proposes to allocate the parcels as Zone 3 (Sensitive Resource Management) or Zone 4 (Natural Resource Conservation).

Table 2-11. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Nickajack Reservoir

Common Name	Habitat Requirement	Suitable Habitat Present
Crustaceans		
Chickamauga crayfish	Small to large rocky streams among leaf litter[1]	Likely
Nickajack cave isopod	Aquatic cave obligate; Nickajack Cave (historically); probably extirpated by impoundment[2]	Unlikely, records historic
Nortons cave amphipod	Small cave pools. Cave obligate[1]	Unlikely, records historic
Fish		
Ashy darter	Medium rivers, slow moving pools with gravel substrates[1]	Likely
Banded darter	Rocky riffles of creeks and rivers	Likely
Bigeye chub	Small to medium tributaries with gravel substrate. Does not tolerate siltation[1]	Likely
Dusky darter	Fast runs and riffles of creeks and small/medium rivers1	Likely
Flame chub	Springs and spring fed streams[1]	Likely Recorded on a TVA Zone 4 parcel
Freshwater drum	Open water of rivers or lakes with mud bottoms[1]	Likely
Golden darter	Medium to large rivers in shallow riffle areas of pea gravel; Tennessee River system[2]	Likely
Greenside darter	Medium to large creeks and small to medium rivers. Riffles with gravel substrate, bedrock pools, quiet lakeshores[1]	Likely
Highfin carpsucker	Pools and backwaters of creeks and rivers with gravel or sandy bottoms[1]	Likely
Logperch	Creeks to rivers to lakes. Often associated with bottom debris[1]	Likely
Popeye shiner	Large creeks to medium rivers with warm, clear water and gravel substrate[1]	Likely
Rainbow darter	Gravel/rubble riffles of small-medium rivers[1]	Likely
Redline darter	Riffles of clear creeks and small to medium rivers[1]	Likely

Common Name	Habitat Requirement	Suitable Habitat Present
River chub	Small to medium rivers in flowing pools and swift currents[1]	Likely
Rock bass	Small cool vegetated lakes, littoral regions of streams. Always with silt free substrate and permanent flow[1]	Somewhat likely
Snail darter[3]	Medium sized rivers in gravel and sandy runs[1]	Likely
Snubnose darter	Rocky pools and riffles of medium rivers[1]	Likely
Southern cavefish	Aquatic cave obligate; cave streams, karst waters, and water supply wells; reported from all karst regions excluding River Valley and Blue Ridge [2]	Likely Recorded on a TVA Zone 3 parcel
Spotfin shiner	Large creeks-small rivers with permanent flow, usually in riffles and raceways[1]	Likely
Stargazing minnow	Creeks and small to medium rivers in rocky/gravel runs and riffles. Requires warm clear wate[1]	Somewhat likely
Striped shiner	Creeks and small to medium rivers with swift current, gravel substrate and pools and riffles.[1]	Likely
Tennessee dace	Pools of spring fed headwaters[1]	Unlikely
Whitetail shiner	Riffles and pools in headwaters, creeks and small rivers with clear water and gravel substrate[1]	Somewhat likely
Yellowfin madtom	Slow pools of medium to large creeks and small rivers that are relatively unsilted[1]	Likely
Gastropods		
Anthony's river snail	Cobble rubble substrate of large rivers[1]	Likely
Armored rocksnail	Partially buried logs, gravel, and preferably submerged rock outcrops; lower Cumberland River and larger tributaries; Obey River[2]	Likely
Corpulent hornsnail	Extremely limited distribution in Tennessee River from Battle Creek at Ketchall (Kimball), Marion County, Tennessee, downstream[2]	Unlikely
Ornate rocksnail	Freshwater, does not adapt to dam tail water situations[1]	Unlikely
Royal marstonia	Known from shallow littoral zone of two cave spring runs, on mixed substrate of mud, sand, & detritus; lower Seq. R.; Marion County[2]	Unlikely
Smooth mudalia	Medium to large rivers, on shoals; portions of upper TN River and some larger tributaries; Hiwassee River[2]	Somewhat likely
Spiny riversnail[3]	Shallow shoals with a fast current[1]	Likely
Varicose rocksnail	Rocky shoals and riffles on medium-big rivers with moderate current[1]	Likely
Warty rocksnail	Rocky substrates in riffle systems; Elk River and larger tributaries (Tennessee River watershed) [2]	Likely
Mussels		
Cumberland monkeyface[3]	Riffle and shoal areas of headwater streams and big rivers. Requires clean fast flowing water[1]	Likely
Dromedary pearlymussel[3]	Riffles at sand and gravel shoals of moderate current rivers. In Tennessee, it is also found in deeper slower moving water[1]	Likely
Fanshell	Medium to large streams, sometimes found in rivers with gravel substrate and strong current[1]	Likely
Hickorynut	Sand/gravel substrate in deep water[1]	Likely
Kidneyshell	Small to medium rivers, sometimes in shallow areas of impoundments with moving water[1]	likely

Common Name	Habitat Requirement	Suitable Habitat Present
Mountain creekshell[3]	Most often encountered in small headwater creeks and streams in gravel and sand substrate[1]	Unlikely
Orange-foot pimpleback[3]	Riffles and shoals in medium to large rivers[2]	Likely
Pale lilliput	Small tributary rivers and streams, in firm rubble, gravel, and sand substrates in shallow riffles and shoals; lower Tenn. River system[2]	Somewhat likely
Pink mucket*	Large river species associated with swift currents. May be able to reproduce in impoundments with flowing water[1]	Likely
Pocketbook	Generalized habitat, adapts to both deep impoundments and shallow rivers[1]	Likely
Ring pink	Gravel and sandbars of large rivers[1]	Likely
Rough pigtoe[3]	Medium to large rivers in sand/gravel/cobble shoals. Occasionally found in flats and muddy sand[1]	Likely
Slabside pearlymussel	Large creeks to medium sized rivers, in riffles/shoals of sand, fine gravel, and cobble substrates with mod current; Tennessee River watershed.[2]	Likely
Smooth rabbitsfoot	Small to medium rivers with moderate to swift current[1]	Likely
Snuffbox	Riffles of medium-large rivers with stony or sandy bottoms, in swift currents, usually deeply buried; Tennessee and Cumberland river systems[2]	Likely
Spectaclecase	In sheltered areas of large rivers[1]	Likely
Tennessee heelsplitter	Spring runs, creeks, and small rivers, in substrate of sand and mud; upper Tennessee and Conasauga river watersheds; Blue Ridge and Ridge Valley[2]	Somewhat likely
Tuberculed blossom pearlymussel*	Shallow riffles and shoals with sand/gravel substrate in creeks and medium rivers[1]	Likely

[1] Source: NatureServe 2016
[2] Source: TDEC 2014
[3] Records within Nickajack Reservoir

For information on aquatic species and potential impacts of the draft RLMP, see Volume I, Section 3.6.

2.2.6 Water Quality

Nickajack Reservoir is categorized by TVA as a run-of-river reservoir with an average depth is 23.3 feet. It usually takes only three or four days for water to flow through the reservoir, which helps keep the water mixed, preventing it from stratifying (separating into layers of different temperatures) during the summer. This allows oxygen in the lower water column to be replenished and limits algal growth, thereby reducing chlorophyll concentrations.

The most recent ratings for dissolved oxygen, chlorophyll, and sediment for Nickajack Reservoir from TVA's Reservoir Ecological Health Ratings program are presented in Table 2-12. TVA has

found dissolved oxygen conditions in Nickajack Reservoir to generally be consistently good, even at the forebay. The relatively short residence time of 3 days contributes to maintenance of healthy levels of dissolved oxygen. The chlorophyll rating in the reservoir has been good in most years, but has been found to be poor at times during low streamflow. Sediment quality has been rated fair due to low levels of polychlorinated biphenyls in some samples and chlordane was detected in 1993.

Table 2-12. Ecological Health Indicators at Nickajack Reservoir – 2012

Monitoring Location	Dissolved Oxygen	Chlorophyll	Sediment
Forebay	Good	Poor	Fair

Source: TVA 2016b

TDEC establishes water quality standards for individual waterbodies by identifying the most stringent criteria for each assigned use and considering the antidegradation status. The seven designated uses for the waterways of the State are defined in Rules of Tennessee Department of Environment and Conservation, Chapter 0400-40-04 and include: domestic water supply, industrial supply, fish and aquatic life, trout stream, naturally reproducing trout stream, livestock watering and wildlife, and irrigation. Waterbodies in Tennessee that do not fully support their designated uses based on a review of water quality data and information are considered to be impaired and included in the 303(d) list. The entire length of Nickajack Reservoir has been listed as impaired by TDEC due to sediment contamination by PCBs and dioxin (TDEC 2016). TDEC also listed several direct tributaries to the reservoir as not supporting, including Shoal Creek (on-site septic systems, sanitary sewer overflows, and municipal separate storm sewer system discharges), Mountain Creek (municipal separate storm sewer system discharges and site clearance/land development), Chattanooga Creek (PCBs, dioxin, combined sewer overflows, municipal storm sewer system discharges), and South Chickamauga Creek (siltation).

While water supply intakes and waste water discharges are regulated by the states under the National Pollutant Discharge Elimination System, TVA permits the actual intake and outfall structures under Section 26a of the TVA Act. The most recent state permit/water withdrawal registration data for water supply withdrawals and waste water discharges directly from or to the reservoirs is provided in Table 2-13. This information does not include withdrawals or discharges in the watersheds.

Table 2-13. Direct Reservoir Average Daily Water Supply Withdrawals and Wastewater Discharges – 2016

2010 Water Withdrawal Volume (MGD)			2010 Wastewater Discharge Volume (MGD)		
Municipal	**Industrial**	**Thermo-electric**	**Municipal**	**Industrial**	**Thermo-electric**
40.78	5.93	0	48.43	7.76	0

Source: TVA 2016b.

For information on water quality and potential impacts of the draft RLMP, see Volume I, Section 3.8.

2.2.7 Wetlands

Wetlands are transitional ecosystems between terrestrial and aquatic communities, where saturation with water is the dominant factor in determining the types of plants and animals present. Wetlands are ecologically important because of their beneficial effect on water quality, their moderation of flow regimes by retaining and gradually releasing water, their value as wildlife habitat, and as areas of botanical diversity. Wetlands exist within and adjacent to TVA reservoirs and are influenced by surface water and groundwater connections to the water levels in these reservoirs. The presence of wetlands immediately on or adjacent to TVA reservoirs is related to the land use characteristics and development status of the shoreline. Lands supporting more intense shoreline development are typically noted as having a decrease in wetland features.

Emergent wetlands typically occur in a narrow elevation zone centered on the summer pool elevation and contain water for much of the growing season. Vegetation typically includes cattail, bulrush, arrowhead, and water plantain. Scrub-shrub wetlands are typically associated with reservoir shorelines and coves and are often transition zones between emergent and forested wetlands. The vegetation can include hardwood trees less than 15 feet tall, but are dominated by shrubs such as silky dogwood, red osier dogwood, buttonbush, alder, willow, and elderberry. Forested wetlands occur on lower-lying, undisturbed areas and along tributary streams on power generation sites. These areas are dominated by flood tolerant hardwood species such as oaks, maples, and ash.

Vegetated wetlands occur with greater frequency and size along the mainstem reservoirs and tailwaters, such as Nickajack, than along the tributary reservoirs and tailwaters. This is due in part to the larger-sized watersheds of mainstem reservoirs resulting in a greater volume of water; greater predictability of the annual hydrologic regime; shoreline and drawdown zone

topography (wider and flatter floodplains, riparian zones, and drawdown zones and large areas of shallow water); and larger sections of relatively still, shallow-water areas. Wetlands tend to be smaller and do not occur as frequently on tributary reservoirs because of the relatively steep drawdown zones, the rolling to steep topography of adjacent lands, shoreline disturbance caused by wave action, and the lower predictability and shorter duration of summer pool levels. Within mainstem reservoirs, wetlands occur on flats between summer and winter pool elevations, on islands, along reservoir shorelines, in dewatering areas, in floodplains, on river terraces, along connecting rivers and streams, around springs and seeps, in natural depressions, in areas dammed by beaver, in and around constructed reservoirs and ponds (diked and/or excavated), and in additional areas that are isolated from other surface waters.

The information presented in this document is derived from the National Wetland Inventory database and supplemented with previous on-the-ground surveys done by TVA, including for the SMI EIS (TVA 1998). Field surveys were not performed for this RLMP to gather more up-to-date information regarding the types and locations of wetlands within the Nickajack Reservoir. The only types of wetlands mapped within the Nickajack Reservoir besides open water are forested and scrub-shrub (Table 2-14).

Table 2-14. Wetland Types within the Nickajack Reservoir

Wetland Type	Acres
Scrub Shrub	2.8
Forested	22.9
Open Water	79.3
Total	**104.9**

Some of the wetland areas within the reservoir are present in local, state, and federally managed areas—including wildlife refuges, wildlife management areas, national forests, parks, and recreation areas—and TVA-designated sites, including small wild areas, habitat protection areas, and ecological study areas (Section 2.2.11).

For more information on wetlands and the potential impacts of the draft RLMP, see Volume I, Section 3.9.

2.2.8 Floodplains

The area encompassed by the draft RLMP extends from Nickajack Dam at TRM (TRM) 424.7, upstream to TRM 471.0 at Chickamauga Dam. The 100-year floodplain is the area that would be inundated by the 100-year flood (base flood).

In Nickajack Reservoir, the 100-year flood elevations for the Tennessee River vary from 635.0-feet msl at Nickajack Dam at Tennessee RM 424.7 to elevation 659.9-feet msl at TRM 471.0 just below Chickamauga Dam. The 500-year flood elevations vary from 639.0-feet msl at TRM 424.7 to 666.3-feet msl at TRM 471.0.

Tabulations of the 100-year and 500-year flood elevations are included in Volume I, Appendix D. For more information on the potential impacts of the draft RLMP on floodplains, see Volume I, Section 3.10.

2.2.9 Air Quality

In accordance with the Clean Air Act Amendments of 1990, all counties that include parts of the Nickajack Reservoir are designated with respect to compliance, or degree of noncompliance, with the National Ambient Air Quality Standards (NAAQS). The NAAQS have been established to protect the public health and welfare with respect to six pollutants: particulate matter, sulfur dioxide, carbon monoxide, ozone, nitrogen dioxide, and lead. An area with air quality better than the NAAQS is designated as “attainment;” while an area with air quality worse than the NAAQS is designated as “non-attainment.” Hamilton and Marion counties in Tennessee and Dade County in Georgia are considered in attainment for all NAAQS. No wilderness areas or parks designated Prevention of Significant Deterioration Class I air quality area occur near the Nickajack Reservoir. General information about air emissions and climate change are identified in Volume I.

Sources of air emissions within lands along the Nickajack Reservoir include industrial development, public works projects, developed recreation sites, motorized watercraft (motor boats, jet skis), and other vehicle traffic. Lands that would be allocated to Zone 5 (Industrial) have the greatest potential to support uses that produce higher levels of air emissions. Major sources of air emissions within Zone 5 include industrial and light manufacturing facilities, barges, trucks and personal vehicles, and barge terminals and operations.

Air emissions generated from land uses on the Nickajack Reservoir vary with type of activity/development. Currently, air emissions from uses on TVA lands on the Nickajack

Reservoir are low. Future projects that have the potential to affect ambient air quality would be planned in detail to minimize air emission impacts and would comply with Clean Air Act regulations.

For information on air quality and the potential impacts of the draft RLMP, see Volume I, Section 3.11.

2.2.10 Cultural and Historic Resources

Cultural resources include prehistoric and historic archaeological sites, districts, buildings, structures, and objects, as well as locations of important historic events that lack material evidence of those events. Cultural resources that are listed, or considered eligible for listing, on the National Register of Historic Places (NRHP) are called historic properties. To be considered an historic property, a cultural resource must possess both integrity and significance. A historic property's integrity is based on its location, design, setting, materials, workmanship, feeling, and association. The significance is established when historic properties meet at least one of the following criteria: (a) are associated with important historical events or are associated with the lives of significant historic persons; (b) embody distinctive characteristics of a type, period, or method of construction; (c) represent the work of a master, or have high artistic value; or (d) have yielded or may yield information important in history or prehistory (36 Code of Federal Regulations [CFR] Part 60.4).

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effects of their proposed undertakings on historic properties and provide the Advisory Council on Historic Preservation an opportunity to comment on those effects. TVA determined that the draft RLMP (Alternative B) is an "undertaking" as defined by the regulations under NHPA. Once an action is determined to be an undertaking, the regulations require agencies to consider whether the proposed activity has the potential to impact historic properties. If the undertaking is such an activity, then the agency must follow the following steps: (1) involve the appropriate consulting parties; (2) define the area of potential effects (APE); (3) identify historic properties in the APE; (4) evaluate possible effects of the undertaking on historic properties in the APE; and (5) resolve adverse effects (36 CFR § 800.4 through 800.13). An APE is defined as the "geographic area or areas within which the undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist" (36 CFR § 800.16). Concerning cultural resources, the APE is taken as the

affected environment for purposes of this EA. TVA defined the APE to be the approximately 451.3-acre area where TVA is proposing a zone change.

Section 106 of the NHPA requires federal agencies to consult with the respective State Historic Preservation Officer and Indian tribes when proposed federal actions could affect historic and cultural resources, including archaeological resources, which are also protected under the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act, in addition to the NHPA.

2.2.10.1 Historical Overview of the Nickajack Region

Nickajack Reservoir occupies a 46-mile section of the Tennessee River that stretches from the city of Chattanooga, Tennessee, to the mouth of the Sequatchie Valley. Archaeological studies indicate that man has occupied this area for several thousand years, culminating with the historic Creek and Cherokee Indians. Hernando de Soto and his expedition were most likely the first white people to see this land; they came through the area in the summer of 1540 enroute to the Mississippi River. Native Americans remained the primary inhabitants of the reservoir area until settlers began to enter the new frontier in the early 1800s.

The Cherokee claimed the land in the reservoir area. While early treaties enabled settlers to inhabit some parts of the Sequatchie Valley, the Jackson and McMinn Treaty of 1817 allowed settlement of Marion County, Tennessee, by transferring land from the Cherokee to the U.S. Government. From this land, the State of Tennessee created Marion County on November 20, 1817.

In 1824, there were 384 recorded land claims by settlers; by 1842, there were more than 2,000. During this time, the U.S. Senate ratified the Treaty of New Echota (1836). In 1838, the “Trail of Tears" displaced approximately 2,500 Cherokees from the lower valley of east Tennessee.

For the area that surrounds Nickajack Reservoir, there is a definite turning point in its social history: the Civil War. The Civil War had brought tremendous damage throughout the area. Both private and public property was ruined; however, in the reservoir area, Chattanooga was by far the hardest hit. With an 1860 population of 2,545, Chattanooga was almost completely destroyed by the competing armies. The Civil War ended, and Tennessee was readmitted to the Union in 1867. Chattanoogans were faced with the prospect of rebuilding their town completely from scratch, but no one doubted that the town would be rebuilt and that it would become one of the important cities of the New South.

2.2.10.2 Archaeological Resources

The Nickajack Reservoir region has been an area of human occupation for the last 13,500 years. This includes five broad cultural periods: Paleo-Indian (>9,200 cal BC), Archaic (9,200-1,000 cal BC), Woodland (1,000 cal BC-AD 900), Mississippian (AD 900-1,500), and Historic (AD 1,500-present). These divisions are based on stylistic changes in artifact types and technological and cultural adaptations. Prehistoric land use and settlement patterns vary during each period, but short- and long-term habitation sites are generally located on flood plains and alluvial terraces along rivers and tributaries. The Sequatchie Valley contains a number of large prehistoric ceremonial centers and village sites, as well as numerous upland caves and rock shelters. By 1,700 AD, several historic Indian tribes traversed the area.

Early European settlement came by way of the valley from Virginia and through the Cumberland Gap. After the American Revolution, the upper Tennessee Valley was opened for settlement, with Knoxville becoming a major town by the 1790s. The Cherokee came to occupy the lower region, including southeastern Tennessee, north Georgia, and north Alabama, to the exclusion of the other historic period groups by the mid-18th century. The region is home to the lower Cherokee Towns including Nickajack Town. While early treaties enabled settlers to inhabit some parts of the Sequatchie Valley, the Jackson and McMinn Treaty of 1817 allowed settlement of Marion County, Tennessee, by transferring land from the Cherokee to the U.S. Government. From this land, the State of Tennessee created Marion County on November 20, 1817. In 1824, there were 384 recorded land claims by settlers; by 1842, there were more than 2,000. During this time, the U.S. Senate ratified the Treaty of New Echota. In 1838, the “Trail of Tears" displaced approximately 2,500 Cherokees from the lower valley of east Tennessee.

The Civil War had brought tremendous damage throughout the area. Both private and public property was ruined; however, in the reservoir area, Chattanooga was by far the hardest hit. With an 1860 population of 2,545, Chattanooga was almost completely destroyed by the competing armies. The Civil War ended, and Tennessee was readmitted to the Union in 1867. Chattanoogans were faced with the prospect of rebuilding their town completely.

Clarence B. Moore (1915) investigated mounds and villages throughout the area including what are now Nickajack Reservoir and neighboring Chickamauga and Guntersville Reservoirs in the early part of the twentieth century. During the 1960s, TVA's proposal to construct Nickajack Dam and Reservoir resulted in excavations within the region by the University of Tennessee (Faulkner and Graham 1965, 1966a, 1966b, Bachman 1966). During the 1964-65 field season,

the Westmoreland-Barber (40MI11) site and the Pittman-Alder (40MI5) site were investigated. In recent decades, TVA fee-owned land has been subject to both systematic and opportunistic archaeological surveys for TVA undertakings and land planning actions. The largest of these archaeological investigations in the Nickajack Reservoir was approximately 3,150 acres (Driskell and Mistovich 1990). However, only 15 percent of Nickajack TVA fee-owned land has been subject to systematic archaeological survey. Thus, archaeological surveys have not been conducted on all of the lands involved in this land planning process. Moreover, many of the previously reported archaeological sites have not been assessed for their NRHP eligibility. Within the 451.3 acres subject to TVA's zone reallocation, these limited archaeological surveys resulted in the identification of 13 archaeological sites.

2.2.10.3 Historic Structures

The acquisition of land for Nickajack Reservoir resulted in the removal of many structures and other man-made features. The few structures that remain represent all historical periods including individual farmsteads or larger scale plantations, civic or religious sites such as churches, cemeteries or schools, and industrial sites such as mills. In addition, structures associated with the inception of TVA may have historic significance such as the NRHP-eligible Nickajack Dam. TVA has conducted a survey of all of the major hydroelectric facilities that TVA built and is currently in the process of nominating Nickajack Dam and its associated facilities to the NRHP. Furthermore, many historic structures remain on adjacent non-TVA land that may be indirectly impacted by activities on TVA land. All projects occurring on TVA land receive project-specific reviews as part of compliance with NEPA and Section 106 of the NHPA.

2.2.11 Natural Areas and Ecologically Significant Sites

Natural Areas include ecologically significant sites, lands designated for a particular resource management objective, and lands that contain sensitive biological, cultural, or scenic resources. Managed areas include lands held in public ownership that are managed by an entity (e.g., TVA, TWRA, State of Tennessee, Marion County) to protect and maintain certain ecological and/or recreational features. A management plan or similar document defines what types of activities are compatible with the intended use of the managed area. Ecologically significant sites are tracts of privately owned land either that are recognized by resource biologists as having significant environmental resources or identified tracts on TVA lands that are ecologically significant, but not specifically managed by TVA's Natural Areas Program.

The TVA Natural Heritage database indicates that there are 20 natural areas on or within TVA parcels along Nickajack Reservoir. The TVA Natural Areas Program manages 7 of the 20 natural areas (Table 2-15). An additional 55 natural areas lie within 3 miles of Nickajack Reservoir. The natural areas along Nickajack Reservoir include TVA and TWRA managed lands, city parks, and state parks.

Table 2-15. TVA Natural Areas Along Nickajack Reservoir

Natural Area	Type	Acres
Huff Branch	Habitat Protection Area	20.4
Little Cedar Mountain	Habitat Protection Area and Small Wild Area	320.0
Marion Bridge	Habitat Protection Area	103.0
Nickajack Cave	Habitat Protection Area, Small Wild Areas, and Wildlife Observation Area	254.5
Nickajack Oak Wetland	Habitat Protection Area	110.3
Raccoon Mountain Pump Storage	Wildlife Observation Area	528.0
Shellmound Road Bluff	Habitat Protection Area	102.8

TVA natural areas on Nickajack Reservoir are categorized as small wild areas (SWAs), ecological study areas, habitat protection areas (HPAs), and wildlife observation areas (WOAs). SWAs are sites with exceptional natural, scenic, or aesthetic qualities that are suitable for low-impact public use, such as foot trails and backcountry campsites. Ecological study areas are sites suitable for ecological research or environmental education. These study areas contain plant or animal populations of scientific interest and/or are located near an educational institution that would utilize and manage the area. HPAs are established to protect rare plants, animals, exemplary biological communities, or unique geological features. WOAs are sites that support concentrations of viewable wildlife such as shorebirds, songbirds, and waterfowl (TVA 2011).

For more information on managed areas and sensitive ecological sites, see Volume I of the EIS, Section 3.13 and Appendix D.

2.2.12 Aesthetics and Visual Resources

Nickajack Reservoir's visual resources vary from the riverine tailwater below Chickamauga Dam through downtown Chattanooga and the Tennessee River Gorge to an open lake expanse above Nickajack Dam. Over two-thirds of the reservoir is riverine in appearance. As the

Tennessee River passes through downtown Chattanooga, numerous industries, barge terminals, utility crossings and outfall pipes are the dominant visual features. Views of the waterway are of greater value to the land-based observer than are views of the shoreline economic development activities as seen by the passing boater.

Lookout Mountain on the left bank and Signal Mountain on the right bank mark a notable change in scenic resources passing downstream from Chattanooga. The steep and wooded left bank of the reservoir is countered on the right bank by a 5- to 6-mile stretch of shoreline dotted with primary and secondary residences, shacks, condominium developments, junk cars, and occasional commercial operations.

Moving downstream, the gorge's high bluff-like walls tower upward more than 1,000 feet from the shoreline, affording spectacular views from overlooks on Raccoon Mountain and various points in Prentice Cooper State Forest. Two cove-like embayments, Cummings Lake and Mullins Cove, are adjacent to the riverway as it passes through the gorge. The scenic, pastoral settings adjacent to these embayments are visible to passing boaters. The gorge provides many scenic vistas from adjacent overlooks and roadside pulloffs along the riverway and provides the Nickajack Reservoir area and the entire Tennessee River Valley with a unique scenic resource.

Moving downstream from the gorge past Bennett Lake with its massive quarrying operation, the reservoir takes on an industrial commercial tone. The old Hales Bar Dam powerhouse protrudes into the reservoir from the left bank and is the location of a commercial marina and campground. Across the reservoir on the right bank is a coal barge loading terminal. Immediately downstream of Hales Bar Marina on the left bank is a barge servicing facility that occupies a fleeting area over half the width of the reservoir. These four operations are the predominant visual features in the landscape as seen by motorists looking upstream from U.S. Highways (US) 41, 64, and 72 bridge and those crossing the reservoir on Interstate 24.

Views downstream from the Interstate 24 crossing and rest area have a higher aesthetic quality. The reservoir widens at this point, taking on a more lake-like appearance. The left bank landscape is mountainous in nature, while the northern shoreline has a ridge-like character. Portions of Sand Mountain forming the reservoir's southern shoreline are interrupted with numerous powerline cuts, railroad cuts and fills, and a varied assortment of developments along State Highway 156. Of greatest scenic value in this area of the reservoir is Nickajack Cave. Little Cedar Mountain, located on the right bank of the reservoir, is a composite of landscapes

ranging from relatively level agricultural fields skirting much of the shoreline to one dominant ridge area with a scenic bluff dropping into the lake at its southernmost tip.

For information on these resources and the potential impacts of the draft RLMP, see Volume I, Section 3.14.

2.2.13 Noise

Sources of noise within lands along the Nickajack Reservoir include those associated with industrial development, developed recreation sites, and project operations. Characteristics of noise emissions associated with common land uses are identified in Volume I.

Lands that TVA proposes to allocate to Zone 5 (Industrial) have the greatest potential to support uses that produce higher levels of noise. The most common measurement of sound and environmental noise is the A-weighted decibel scale (dBA). This is a logarithmic scale that ranges from 0 dBA to about 140 dBA and approximates the range of human hearing. Common sources of noise within Zone 5 include: heavy trucks; rail and barge operations; and industrial workplaces. Noise emission levels for these sources can range from 85 dBA to 100 dBA (U.S. Department of the Interior [USDOI] 2008). Lands that would be allocated to Zone 2 (Project Operations) also have the potential to generate noise, but typically to a lesser degree than industrial development. The primary source of noise from land allocated to Zone 2 is the Nickajack Reservation, including the dam, navigation lock and associated barge operations, access roads; and boat ramp. Noise emission levels for these sources can range from 70 A-weighted decibels (dBA) to 90 dBA (USDOI 2008). Lands allocated to Zone 6 (Developed Recreation) also have the potential to generate noise, but typically to a lesser degree than industrial development. The magnitude of the noise level depends on the location of the facilities and the type and intensity of recreational use. Common sources of noise within Zone 6 typically include motorized watercraft (motor boats, jet skis) and road traffic. Noise emission levels for Zone 6 uses can range from 40 dBA (very quiet) to 90 dBA (jet ski). Noise levels for motor boats and jet skis may also exhibit short elevated bursts of noise as a result of speed of the watercraft and other operational factors.

Lands that would be allocated to Zone 3 (Sensitive Resource Management), Zone 4 (Natural Resource Conservation) and Zone 7 (Shoreline Access) account for approximately 60 percent of land uses at Nickajack Reservoir. Such land uses generally do not create noise emissions

that would have an effect on the ambient noise environment and reflect a general environment consisting of low noise levels.

Under the draft RLMP (Alternative B), approximately 40 percent of land along the reservoir would be allocated to zones that would support land uses with the potential for noise emissions (Zone 2, 5 and 6).

Noise from land uses varies with the type of development and will attenuate with distance from the source and as such, the noise level around the reservoir is relatively low. However, because 40 percent of the TVA-managed land is proposed for allocation to Zones 2 (Project Operations), 5 (Industrial) or 6 (Developed Recreation), the noise level could be marginally higher in certain locations depending on the type and location of the development. Any future projects on parcels that have the potential to affect noise emissions would be planned in detail and may be expected to consist of both water-dependent facilities and other common actions as well as new developments as allowed per each land use zone.

For information on noise and the potential impacts of the draft RLMP see Section 3.15 of Volume I of the EIS.

2.2.14 Socioeconomics and Environmental Justice

2.2.14.1 Population and Economy

The population of the Nickajack Reservoir area is described in Table 2-16. Both counties within the area, exhibit vastly different population characteristics in terms of size and growth. Hamilton County, which contains the city of Chattanooga, has the highest population with 354,098 which represents an increase of 5.2 percent since 2015. In contrast, the population of Marion County is 33,845. Although Marion County is much smaller than Hamilton County, it is projected to grow 18.8 percent from 2015 to 2020 compared to Hamilton County's projected 2.6 percent decline in population. Marion County is 77 percent rural, more than double the state average of 33.6 percent. Hamilton County is on the other end of the spectrum containing a 10 percent rural population. One third of the population of the state of Tennessee is located in rural areas.

As presented in Table 2-17, from 2010 to 2014, an average of 5 percent of the population in the Nickajack Reservoir area was unemployed. The state of Tennessee had an unemployment rate of 6 percent during that same period. The largest sector for employment within both counties is Management, Business Science, and Arts at 27 percent and 37 percent, respectively. The median household income for Marion County from 2010 to 2014 was $40,998. Median

household income in Hamilton County during this period was $47,880. For comparison, the median household income in the state of Tennessee was $44,621.

Table 2-16. Population and Percent Growth – Nickajack Reservoir

Population	County		State
	Marion	Hamilton	Tennessee
Population (2020 - Projection)	33,845	344,951	7,195,375
Population (2015 - Estimate)	28,487	354,098	6,600,299
Population (2014 - Estimate)	28,261	344,772	6,451,365
Population (2010)	28,237	336,463	6,346,105
Projected Growth (2015-2020)	18.8%	-2.6%	8.3%
Percent Change (2010-2015)	0.9%	5.2%	3.9%
Percent Change (2010-2014)	0.1%	2.5%	1.6%
Percent Rural (2010)	77.0%	10.0%	33.6%

Sources: USCB 2015 and USCB 2010a

Table 2-17. Employment and Income, 2010-2014 – Nickajack Reservoir

Employment and Income	County		State
	Marion	Hamilton	Tennessee
Civilian Employed Population 16 Years and Over	11,505	161,007	2,835,895
Management and Business Science and Arts	27%	37%	34%
Service Occupations	13%	17%	17%
Sales and Office	25%	25%	25%
Natural Resources, Construction, and Maintenance	13%	8%	9%
Production, Transportation and Material Moving	23%	13%	15%
Percent of Population > 16 years Unemployed	4%	6%	6%
Median Household Income	$40,998	$47,880	$44,621

Source: Source: USCB 2010b

2.2.15 Environmental Justice

EO 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” formally requires Federal agencies to incorporate Environmental Justice as part of NEPA. Specifically, it directs them to address, as appropriate, any disproportionately high and adverse human health or environmental effects of their actions, programs, or policies on minority and low-income. Although TVA is not one of the agencies subject to this order, TVA routinely considers Environmental Justice impacts as part of the project decision-making process.

The minority population in the Nickajack Reservoir area ranges from 7.5 percent for Marion County to 28.6 percent for Hamilton County (Table 2-18). Hamilton County, the larger of the two within the area, has a higher percent minority population than the 25.4 percent minority within the state of Tennessee. From 2010 to 2014, 20.3 percent of the population within Marion County was below the poverty level, whereas only 16.0 percent was below the poverty level in Hamilton County. Poverty level for the state of Tennessee during this period was 17.8 percent.

Table 2-18. Minority Population and Poverty, 2010-2014 – Nickajack Reservoir

Minority Population and Poverty	County		State
	Marion	Hamilton	Tennessee
Total Population	28,261	344,772	6,451,365
White Alone[1]	26,432	258,373	5,029,109
Black or African American Alone[1]	458	68,961	1,082,001
American Indian and Alaska Native Alone[1]	49	639	17,656
Asian Alone[1]	70	6,617	98,441
Native Hawaiian and Other Pacific Islander Alone[1]	0	151	3,256
Two or More Races	1,142	5,838	122,662
Hispanic or Latino[2]	417	16,439	309,828
Percent Minority	7.5%	28.6%	25.4%
Percent of Population Below Poverty Level	20.3%	16.0%	17.8%

[1]Includes persons reporting only one race
[2] Hispanics may be of any race, so also are included in applicable race categories.

Source: USCB 2010b

For information on socioeconomics and the potential impacts of the draft RLMP, see Volume I, Section 3.15 of the EIS.

2.3 Major Features of Nickajack Reservoir

2.3.1 Raccoon Mountain

The Raccoon Mountain Pumped-Storage project is TVA's only pumped-storage facility and its largest hydroelectric facility. The facility is adjacent to the Nickajack Reservoir at TRM 444.6. During periods of low electricity demand, water is pumped from Nickajack Reservoir at the base of Raccoon Mountain to the reservoir built at the top. Then, the stored water is used to generate electricity when additional power is needed in the TVA system. During high power demand, water is released via a tunnel drilled through the center of the mountain to drive generators in the mountain's underground power plant.

Construction at Raccoon Mountain began in 1970 and was completed in 1978. The upper reservoir has 528 acres of water surface, and the associated dam is 230 feet high and

8,500 feet long. There are four generating units with a net dependable capacity of 1,652 megawatts. Net dependable capacity is the amount of power a plant can produce on an average day, minus the electricity used by the plant itself.

The 2,536 acre reservation associated with this power plant includes several recreation related features and attractions. A visitor center located on the top of Raccoon Mountain includes exhibits and provides expansive views of the Tennessee River gorge. Nearby Laura Point recreation area provides picnic facilities and restrooms. Recreation facilities including fishing berms, a boat ramp, picnic tables, and restrooms have also been developed on the portion of the reservation bordering the shoreline of Nickajack Reservoir.

Under a cooperative agreement with the Southern Off-Road Bicycle Association, a 19-mile system of trails for hiking, biking, and running have also been developed on the reservation property. This trail system attracts users from within and outside the region and special events such as trail races occur frequently. Additional information concerning Raccoon Mountain can be found on TVA's website, https://www.tva.gov/Energy/Our-Power-System/Hydroelectric/Raccoon-Mountain.

2.3.2 Hales Bar Dam

The History of Hales Bar Dam

The Hales Bar Dam was one of the first major multiple-purpose dams in this country. The construction of Hales Bar Dam began in October 1905 and continued until November 4, 1913. It was originally intended as a navigation dam to flood the treacherous shoals and rapids of the Tennessee River gorge below Chattanooga. However, the power potential of this steep section of the river influenced the formation of the Chattanooga and Tennessee River Power Company.

TVA acquired Hales Bar Dam in 1939 as a part of holdings of the Tennessee Electric Power Company, and several deficiencies had to be corrected to assimilate the project into the TVA system. Not the least among these was the persistent foundation leakage dating back to the original construction period. Leakage through the foundation was noted soon after the dam was completed, and several attempts to stop the flow prior to TVA's acquisition were attempted with only temporary success. TVA carried out an extensive foundation treatment program for Hales Bar Dam from 1940 to 1943 which seemed effective, but several years later, boils began to reappear in the river below the dam. Investigations in 1960 indicated that leakage had increased to nearly 2,000 cubic feet per second.

In 1962, TVA again tried to remedy the foundation, but with less than satisfactory results. In addition to the leakage difficulties, inadequate lock facilities presented a navigational problem. A large increase in the traffic volume on the Tennessee River prompted studies for new and larger navigation locks at several mainstream dams including Hales Bar. These studies indicated that construction of a watertight cofferdam for the addition of a new lock at Hales Bar would be expensive if not impractical due to the poor foundation conditions. Also, the uncertainty that foundation repairs could ensure the safety of the present and future structures on a long-term-basis left some doubt about the advisability of attempting major additions at Hales Bar.

After further studies and investigations, including consultations with foundation experts, the decision was made to build a new dam, locks, and powerhouse at the Nickajack site, where sound geologic conditions were known to exist, rather than to invest additional funds in an uncertain solution at Hales Bar. In September 1963, a planning report, “The Nickajack Project” was issued to establish the scope of the major features of the project (TVA 1972).

The Removal of Hales Bar

The spillway and non-overflow section on Hales Bar Dam were removed to provide adequate flow capacity and navigational clearance. The removal had to be accomplished without lowering the reservoir and with minimum interruptions to navigation. This was the largest undertaking of this kind ever attempted by TVA.

TVA sought removal of the dam by contractual agreements, with the exception of the spillway gates, gate hoists, and bridge deck sections which would be removed by TVA. All blasting operation was to be performed after the impoundment of Nickajack Reservoir. On June 27, 1967, Bi-Co Pavers, Inc. of Dallas, Texas (contractor) was awarded the contract for the removal of Hales Bar Dam.

The contractor began work on July 19, 1967, and began drilling on August 8. The spillway weirs were drilled from a special drill barge located downstream, and the non-overflow sections and spillway piers were drilled from deck level. All drilling was completed by September 25, 1967, except for three holes in each pier near the downstream face. Drilling of these holes would likely cut some of the “hairpin” reinforcing bars around the spillway gates trunnions which transfer the water load on the gates to the structure. The contractor began drilling these holes one week before the Nickajack Reservoir impoundment was complete when the consequences of the risk were lessened.

Blasting for removal began in the non-overflow sections adjacent to the spillways on January 23, 1968, and progresses towards the locks. TVA completely removed the spillway gates and decks on January 20 and 21, 1968. The first charge loaded by divers was detonated February 12, 1968. Blasting and removal of debris with a clamshell were continued until September 1968. An estimated 24,420 feet of 3 ½ inch holes were drilled for blasting, and some 26,800 pounds of explosives were used in drilled holes plus several thousand pounds detonated as underwater adobe shots (TVA 1972).

2.3.3 Trail of Tears National Historic Trail

Trail of Tears National Historic Trail was designated by the U.S. National Park Service (USNPS) to commemorate the 1838 historic passage of thousands of removed Indians from their homelands in the Southeast to Indian Territory in the West to what is now Oklahoma. Many people perished during this journey. There are land and water components of the trail crossing through Tennessee in Marion County. The Trail's overland portion was reconstructed from historical research and some field verification; therefore TVA may not know the exact locations of overland portions. The water component used to canoe spans the length of the Tennessee River from Chickamauga Dam Reservation to Nickajack Dam Reservation. The land component of the trail may cross the Tennessee River near Parcel 16 on Nickajack Reservoir.

2.4 The Future Management of Reservoir Lands

Varying types of land management or conservation techniques coupled with development could occur along Nickajack Reservoir. The implementation of the NRP would drive the types of programs conducted on TVA lands set aside due to natural or sensitive resources. Business opportunity, overall economy, local incentives, and community planning practices are factors that could contribute to the types of industry locating or expanding along the reservoir. Recreation demand is driven by population levels, recreation participation rates, changing preferences for different types of recreation, and innovations in recreation equipment. Residential development is often times opportunistic; however, the lands set aside for such use are based on the types of property rights conveyed by TVA upon sale of the property. The TVA lands managed by other federal, state, or local agencies would most likely continue to do so in a similar manner.

CHAPTER 3. LAND PLANNING PROCESS

3.1 Process for Planning Land

The reservoir land management planning process involves allocation of TVA fee-owned land to seven defined land use zones. The term “land use zone” refers to a descriptive set of criteria given to distinct areas of land based on location, features, and characteristics. The land use zone definitions listed in Table 3-1 are identical to those listed in the NRP. The definition of a land use zone provides a clear statement of how TVA will manage public land, and allocation of a parcel to a particular land use zone identifies that land for specific uses. Implementation of an RLMP minimizes conflicting land uses and makes it easier to handle requests for use of public land.

This draft RLMP was developed by a team of land managers and technical experts from TVA, knowledgeable about the reservoir and its resources. The planning team proposed land use decisions by integrating public needs, environmental conditions, economic benefits, state and federal policies, and the original congressional intent of the Nickajack Reservoir project. The process includes information from resource data, computer analysis, the public, other agencies, and knowledgeable TVA staff. This draft RLMP is consistent with the strategic direction of the NRP and the objections of the CVLP. Furthermore, the categorization and management of TVA-owned shoreline access land along Nickajack Reservoir tiers from the SMI EIS (TVA 1998). The planning process is completed once TVA conducts an environmental review of the draft RLMP as well as reasonable alternatives, in compliance with NEPA. This process allows the public and intergovernmental partners to review TVA’s proposed allocations and provide input.

Table 3-1. Land Use Zone Definitions

Zone	Definition
Zone 1 Non-TVA Shoreland	Shoreland that TVA does not own in fee. This land may be privately owned or owned by a governmental entity other than TVA. Uses of this non-TVA land may include residential, industrial, commercial, and/or agricultural. In many instances, TVA may have purchased the right to flood and/or limit structures on this non-TVA land (i.e., flowage easement). TVA’s permitting authority under Section 26a of the TVA Act applies to construction of structures on non-TVA shoreland. Non-TVA shoreland allocations are based on deeded rights and, therefore, will not change as a result of the lands planning process. This category is provided to assist in comprehensive evaluation of potential environmental impacts of TVA’s allocation decision.

Zone	Definition
Zone 2 Project Operations	Land currently used, or planned for future use, for TVA operations and public works projects, including: • Land adjacent to established navigation operations — Locks, lock operations and maintenance facilities, and the navigation work boat dock and bases. • Land used for TVA power projects operations — Generation facilities, switchyards, and transmission facilities and rights-of-way. • Dam reservation land — Areas acquired and managed for the primary purpose of supporting the operation and maintenance of TVA dams and associated infrastructure; secondary uses may also include developed and dispersed recreation, maintenance facilities, miscellaneous TVA field offices, research areas, and visitor centers. • Navigation safety harbors/landings — Areas used for tying off commercial barge tows and recreational boats during adverse weather conditions or equipment malfunctions. • Navigation dayboards and beacons — Areas with structures placed on the shoreline to facilitate navigation. • Public works projects — Includes rights-of-way for public utility infrastructure, such as sewer lines, water lines, transmission lines, and major highway projects.
Zone 3 Sensitive Resource Management	Land managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or other land features/natural resources TVA considers important to the area viewscape or natural environment. Recreational natural resource activities, such as hunting, wildlife observation, and camping on undeveloped sites, may occur in this zone, but the overriding focus is protecting and enhancing the sensitive resource the site supports. Areas included are: • TVA-designated sites with potentially significant archaeological resources. • TVA public land with sites/structures listed in or eligible for listing in the National Register of Historic Places**.** • Wetlands — Aquatic bed, emergent, forested, and scrub-shrub wetlands as defined by TVA. • TVA public land under easement, lease, or license to other agencies/individuals for resource protection purposes. • TVA public land fronting land owned by other agencies/individuals for resource protection purposes. • Habitat protection areas — These TVA natural areas are managed to protect populations of species identified as threatened or endangered by the U.S. Fish and Wildlife Service, state-listed species, and any unusual or exemplary biological communities/geological features. • Ecological study areas — These TVA natural areas are designated as suitable for ecological research and environmental education by a recognized authority or agency. They typically contain plant or animal populations of scientific interest or are of interest to an educational institution that would utilize the area. • Small wild areas — These TVA natural areas are managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural, scenic, or aesthetic qualities that can also support dispersed, low-impact types of outdoor recreation.

Zone	Definition
	• River corridor with sensitive resources present — A river corridor is a segment of a river and the adjacent land along the banks. River corridors often consist of a linear green space of TVA land serving as a buffer to tributary rivers entering a reservoir. These areas will be included in Zone 3 when identified sensitive resources are present. • Significant scenic areas — Areas designated for visual protection because of their unique vistas or particularly scenic qualities. • Champion tree site — Areas designated by TVA as sites that contain the largest known individual tree of its species in that state. The state forestry agency "Champion Tree Program" designates the tree, while TVA designates the area of the sites for those located on TVA public land. • Other sensitive ecological areas — Examples of these areas include heron rookeries, uncommon plant and animal communities, and unique cave or karst formations.
Zone 4 Natural Resource Conservation	Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Areas included are: • TVA public land managed for wildlife or forest management projects. • TVA public land under easement, lease, or license to other agencies for wildlife or forest management purposes. • TVA public land fronting land owned by other agencies for wildlife or forest management purposes. • Dispersed recreation areas maintained for passive, dispersed recreation activities, such as hunting, hiking, bird watching, photography, primitive camping, bank fishing, and picnicking. • Shoreline conservation areas — Narrow riparian strips of vegetation between the water's edge and TVA's back-lying property that are managed for wildlife, water quality, or visual qualities. • Wildlife observation areas — TVA natural areas with unique concentrations of easily observed wildlife that are managed as public wildlife observation areas. • River corridor without sensitive resources known to be present — A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. River corridors will be included in Zone 4 unless sensitive resources are present (see Zone 3). • Islands where sensitive resources are not known to be present or which support existing development.
Zone 5 Industrial	Land currently used, or planned for future use, for economic development, including businesses in distribution/processing/assembly and manufacturing. Preference will be given for businesses requiring water access. There are two primary types of uses for TVA land allocated for Industrial: (1) access for water supply or structures associated with navigation such as barge terminals, mooring cells, etc., or (2) land-based development potential. Areas included are: • TVA public land under easement, lease, or license to other agencies/individuals/ entities for industrial purposes. • TVA public land fronting land owned by other agencies/individuals/entities for industrial purposes.

Zone	Definition
	In some cases, TVA land allocated to industrial use would be declared surplus and sold at public auction. Types of development that can occur on this land are: • Industry — Manufacturing, fabrication, and distribution/processing/assembly involving chemical, electronics, metalworking, plastics, telecommunications, transportation, and other industries. Industry does not include retail or service-based businesses. • Industrial access — Access to the waterfront by back-lying property owners across TVA property for water intakes, wastewater discharge, or conveyance of commodities (i.e., pipelines, rail, or road). Barge terminals are associated with industrial access corridors. • Barge terminal sites — Public or private facilities used for the transfer, loading, and unloading of commodities between barges and trucks, trains, storage areas, or industrial plants. • Fleeting areas — Sites used by the towing industry to switch barges between tows or barge terminals that have both offshore and onshore facilities. • Minor commercial landing — A temporary or intermittent activity that takes place without permanent improvements to the property. These sites can be used for transferring pulpwood, sand, gravel, and other natural resource commodities between barges and trucks.
Zone 6 Developed Recreation	Land currently used, or planned for future use, for concentrated, active recreational activities that require capital improvement and maintenance of developed infrastructure, including: • TVA public land developed for recreational purposes, such as campgrounds, day use areas, etc. • TVA public land under easement, lease, or license to other agencies/individuals/entities for developed recreational purposes. • TVA public land fronting land owned by other agencies/individuals/entities for developed recreational purposes. Residential use, long-term accommodations, and/or individually owned units are not permitted on land allocated for developed recreation. Types of development that can occur on this land are: • Public recreation — Recreation amenities developed and owned by a public agency that are open to the public. Public recreation areas may have varying levels of development, ranging from a water access site (e.g., launching ramp) to a marina facility. Facilities at public recreation areas could include playgrounds/play structures, picnic facilities, tennis courts, horseshoe areas, play courts, recreation centers, trails, greenways, natural areas, amphitheaters, food concessions (vending, snack bar), access to water for fishing and boating, swimming areas and swimming pools, launching ramps, courtesy piers, canoe access, marina facilities owned by the public entity, parking, and campgrounds. Cabins or other overnight accommodations (other than campgrounds) are only permitted if the public recreation area is operated by a state or state agency as a component of a state park system. • Public recreation areas and facilities are typically owned and operated by the federal, state, county, or local government. However, private entities may operate recreation facilities on public recreation land as concessionaires under agreement with the public entity controlling the property. The use of the facilities may be offered free or for a fee. Time-forward, public-private partnerships where facilities are owned by

Zone	Definition
	private investors will not be approved on public recreation land. All structures and facilities should be owned by the public entity. • Commercial recreation — Recreation amenities that are provided for a fee to the public intending to produce a profit for the private owner/operator. These primarily water-based facilities typically include marinas and affiliated support facilities such as stores, restaurants, campgrounds, and cabins and lodges. Where applicable, TVA will require appropriate compensation for the commercial use of the property.
Zone 7 Shoreline Access	TVA-owned land where Section 26a applications and other land use approvals for residential shoreline alterations are considered in accordance with TVA's Shoreline Management Policy. Types of development/management that may be permitted on this land are: • Residential water use facilities, e.g., docks, piers, launching ramps/driveways, marine railways, boathouses, enclosed storage space, and nonpotable water intakes. • Shoreline access corridors, e.g., pathways, wooden steps, walkways, or mulched paths that can include portable picnic tables and utility lines. • Shoreline stabilization, e.g., bioengineering, riprap, gabions, and retaining walls. • Shoreline vegetation management.

Prior to proposing parcel allocations, the TVA planning team reviewed the characteristics of each parcel (i.e., location and existing conditions). TVA also reviewed deeds of selected tracts previously sold to private entities to identify existing shoreline access rights. In addition, the planning team honored all existing commitments—that is, existing leases, licenses, and easements. No sensitive resources surveys were conducted on committed land. The need for field reviews for uncommitted parcels was determined based on data from the TVA Natural Heritage database. Land with identified sensitive resources was proposed to be allocated to Zone 3 (Sensitive Resource Management). The remaining parcels were proposed for allocations based on reservoir planning objectives and public input. Proposed management of each parcel was made by consensus among the TVA planning team. When developing the proposed RLMPs, the planning team identified proposed allocations and used the zone definitions listed above to reach consensus on the proposed allocations of the reservoir land.

In developing draft RLMPs, TVA proposes to allocate lands currently committed to a specific use to a zone compatible with that use unless there is an overriding need to change the use. Land currently committed to a specific use was allocated to a zone compatible with that use unless there was an overriding need to change the use. Some committed land uses are determined by the covenants and provisions of easements, leases, licenses, and sale and transfer agreements. Committed lands include the following: properties where TVA has granted

landrights (easements, leases, etc.) for specific uses, properties where TVA has previously identified resources in need of protection, Project Operations lands (transmission lines, dam reservations, public infrastructure, etc.), and lands fronting wildlife management areas. Possible reasons to change a committed land use would be to prevent or remedy ongoing adverse impacts resulting from the actions of a license or easement holder.

Approximately 1,424 acres (39.5 percent) of the TVA land surrounding Nickajack Reservoir are committed due to existing agreements, TVA operations, or other public infrastructure projects. Agricultural licenses are not considered as committed uses because they are an interim use of TVA land.

Approximately 2,180 acres (60.5 percent) of the TVA land surrounding Nickajack Reservoir are uncommitted. Technical specialists collected field data on many uncommitted parcels to identify areas containing known sensitive resources. Representatives from various TVA organizations met to propose how these uncommitted lands should be allocated into the seven planning zones. The location of known and potentially sensitive resources was used in determining the capability and suitability of potential uses for each parcel of land.

3.2 Nickajack Reservoir Goals and Objectives

The NRP established long–term land planning goals and objectives. While these goals and objectives were established to guide planning decisions across the Valley, these same goals and objectives can be applied when planning specific reservoirs.

Goal

TVA will strive to continue to balance shoreline development, recreational use, sensitive and natural resource management, industrial use and other land uses in a way that maintains the quality of life and other important values across the region.

Objectives

Apply a systematic method of evaluating and identifying the most suitable uses of TVA public lands using resource data, stakeholder input, suitability and capability analyses, and TVA staff input.

- Identify land use zone allocations to optimize public benefit and balance competing demands for the use of public lands.

- Identify land use zone allocations to support TVA's broad regional resource development mission. TVA reservoir properties are managed to provide multiple public benefits, including recreation, conservation, and economic development.
- Provide a clear process by which TVA will respond to requests for use of TVA public land.
- Comply with federal regulations and EOs.
- Enhance the protection of significant resources, including threatened and endangered species, cultural resources, wetlands, unique habitats, natural areas, water quality, and the visual character of the reservoir.
- Provide a mechanism that allows local, state, and federal infrastructure projects when the use is compatible with the zone allocation.

3.3 Parcel Allocations

TVA's land planning process (Section 3.1) along with the goals and objectives specific to Nickajack Reservoir (Section 3.2) were used to develop this draft RLMP. Through this process, TVA proposes allocations for each reservoir parcel to one of the seven planning zones as indicated in Table 3-2.

Table 3-2. Summary of Proposed Land Use Allocations for Nickajack Reservoir Land Management Plan (Alternative B)

Allocation Designation		Number of Parcels	Acres
Zone 2	Project Operations	7	1,179.4
Zone 3	Sensitive Resource Management	6	1,356.7
Zone 4	Natural Resource Conservation	8	807.4
Zone 5	Industrial	5	85.5
Zone 6	Developed Recreation	13	175.1
Zone 7	Shoreline Access	2	0.7
Total		**41**	**3,604.7**

Figure 3-1 represents the percent of land acreage on Nickajack Reservoir that would be allocated to each land use zone under the draft RLMP (Alternative B of the EIS). A detailed description of each zone and the identification of the land zoned by each category is presented below.

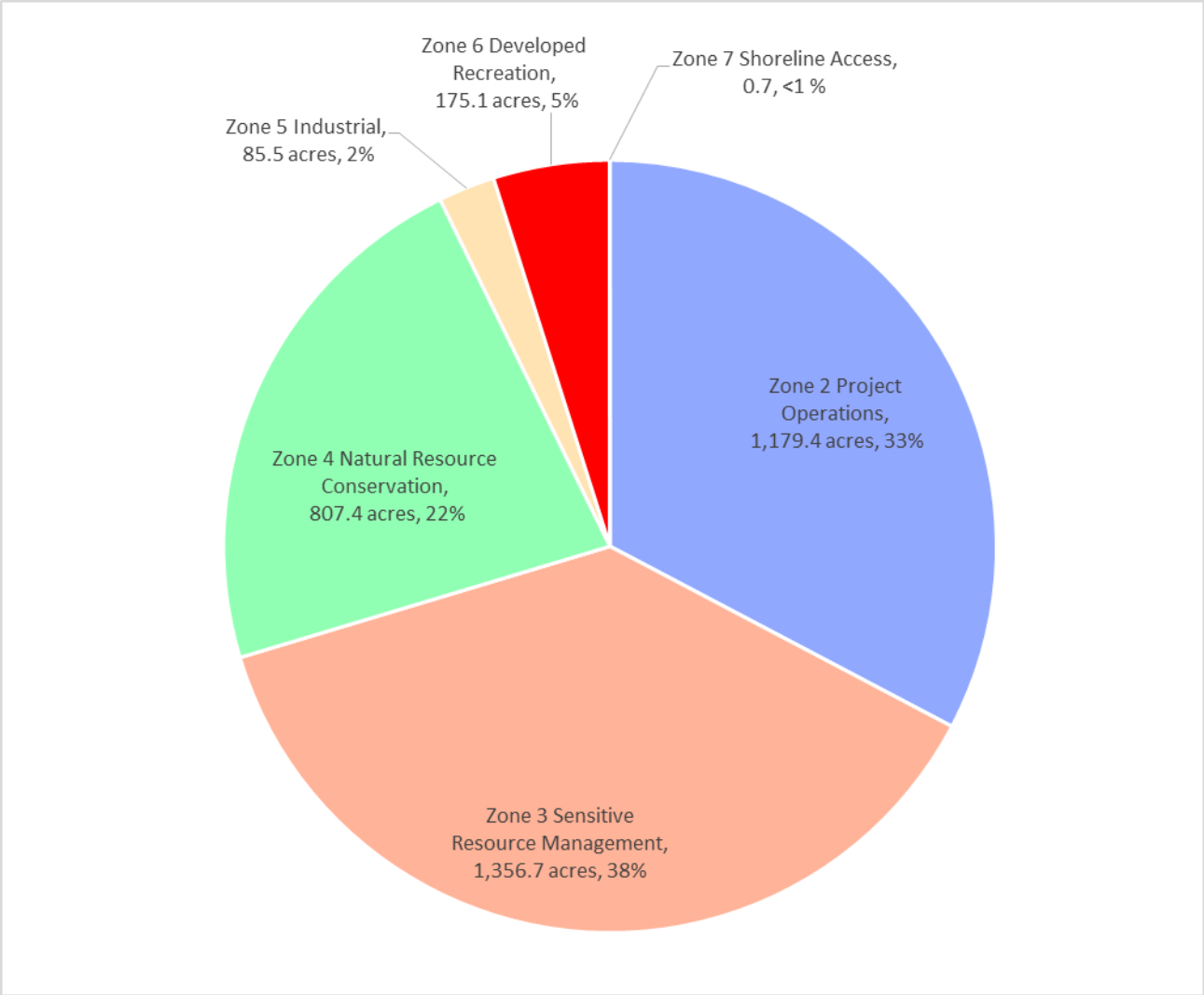


Figure 3-1. Percent of Nickajack Reservoir Acreage Allocated by Zone

- Zone 2 (Project Operations). Lands allocated to Zone 2 are used for TVA operations and public works projects. There are 1,179.4 acres proposed to be allocated to Zone 2 (Project Operations). The largest parcel proposed for allocation to Zone 2 is the Nickajack Dam Reservation. Existing development includes the dam powerhouse and associated access roads, transmission lines and substations; navigation lock and associated access roads and mooring cells; roads; boat ramp; and a campground. The southern bank portion of this parcel consists of a day use recreation area with a boat ramp, and the northern portion of this parcel contains another boat ramp and a picnic area.

- Zone 3 (Sensitive Resource Management). Zone 3 lands are managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment. Approximately 38 percent (1,356.6 acres) of the TVA land on Nickajack Reservoir are proposed for allocation to Zone 3 under the draft RLMP. The parcels included in this allocation represent areas where high-quality wetland habitat, wildlife habitat, scenic buffers, or cultural and historic resources are present. The largest parcels that would be allocated to Zone 3 are Parcels 9 and 36. Parcel 9 is known as Cedar Mountain and consists in part of the Marion Bridge HPA. Parcel 36 is the Nickajack Cave HPA.

- Zone 4 (Natural Resource Conservation). Lands proposed for allocation to Zone 4 are managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Under the draft RLMP, approximately 22 percent of the TVA managed land on Nickajack Reservoir is proposed to be allocated to Zone 4 (807.4 acres). The largest parcel that would be allocated as Zone 4 is Parcel 7, which is located adjacent to the Marion Memorial Bridge HPA and the ROW for US 41. This parcel provides a unique habitat for plants and animals, however, no sensitive species are known to be present.

- Zone 5 (Industrial). Lands proposed for allocation to Zone 5 are managed for economic development including businesses in distribution/processing/assembly and light manufacturing. Lands proposed for allocation to this zone reflect existing industrial uses.

- Zone 6 (Developed Recreation). Land proposed for allocation to Zone 6 includes lands currently used or planned for recreational purposes, such as boat-launching ramps, campgrounds, marinas, and parks. Under the draft RLMP, approximately 5 percent (175.1 acres) of TVA-owned land around Nickajack Reservoir is proposed for allocation to Zone 6. For example, Parcel 6 comprises 43 acres that are managed by Marion County under a permanent public recreation easement. Parcel 2 is located adjacent to former TVA property that was sold for residential and recreational development and is adjacent to an existing developed recreational area (the Shellmound Campground and

Shellmound Day Use Area). Parcel 3 is located adjacent to Parcel 2 and was also sold for residential and recreational development. However, under a Zone 6 allocation, back-lying property owners do not have the necessary access rights to request individual private water use facilities. Given the location of this parcel, it would be suitable for developed recreation, therefore future requests for facilities supporting developed recreation would be considered.

- Zone 7 (Shoreline Access). There are two parcels proposed for allocation to Zone 7 and Zone 7 lands account for less than 1 percent of TVA managed land on Nickajack Reservoir. The two parcels have the necessary access rights to request individual private water use facilities.

When the CVLP was developed in 2011, TVA anticipated that some parcels of land may be better allocated to different land use zones than those initially identified. As discussed in Volume I of the EIS, TVA proposes to update the target allocation ranges of the CVLP based on the eight draft RLMPs and to recalibrate the CVLP with the periodic updates to the NRP. The preliminary results of the Nickajack Reservoir land planning effort were included in the proposed changes to the CVLP. Table 3-3 compares the results of this land planning effort and the 2011 CVLP estimates for Nickajack Reservoir.

Under the draft RLMP, TVA would allocate a greater number of lands to all land use zones except Zone 4 (Natural Resource Conservation) and Zone 5 (Industrial). Fewer areas would be allocated to Zone 4 (Natural Resource Conservation) and Zone 5 (Industrial) than estimated by TVA when completing its CVLP in 2011. These lands would be placed into more appropriate designations, as discussed below.

Table 3-3. Draft Nickajack Reservoir Land Management Plan (Alternative B) and 2011 Comprehensive Valleywide Land Plan Comparison

Allocation Designation		Draft Nickajack Reservoir Land Management Plan	2011 Comprehensive Valleywide Land Plan
Zone 2	Project Operations	33%	20%
Zone 3	Sensitive Resource Management	38%	25%
Zone 4	Natural Resource Conservation	22%	51%
Zone 5	Industrial	2%	3%
Zone 6	Developed Recreation	5%	3%
Zone 7	Shoreline Access	<1%	0%

Zone 2 (Project Operations)
TVA has a number of transmission lines that cross reservoir property surrounding Nickajack Reservoir. In addition, there are large number of highways and local roads located on TVA lands with easements to the appropriate managing agency. Because the 2011 CVLP underestimated the amount of lands encumbered with roadways, TVA proposes to increase the lands allocated to Zone 2 in the draft RLMP to include this infrastructure.

Zone 3 (Sensitive Resource Management)
A large change from the 2011 CVLP and this draft RLMP occurs within the Zone 3 designation, in part because TVA obtained additional information on federally and state-listed species and significant cultural resources during this planning effort. The majority of the change came from the proposed expansion of the Marion Memorial Bridge HPA to include the adjacent tract on Cedar Mountain that was once allocated for Zone 4 (Natural Resource Conservation). Likewise, TVA proposes to allocate more lands to Zone 3 to protect cultural resources identified when additional cultural resources surveys and historical data were gathered for the planning effort.

Zone 4 (Natural Resource Conservation)
The greatest change from the 2011 CVLP and this draft RLMP occurs within the Zone 4 designation. TVA proposes to allocate TVA property adjacent to the Marion Memorial Bridge HPA on Cedar Mountain to Zone 3, thereby reducing the overall percent of proposed for allocation to Zone 4 by almost 50 percent and increasing the amount of land proposed for a Zone 3 allocation.

Zone 5 (Industrial)
After reviewing the availability of public infrastructure and the presence of known sensitive resources, no additional large tracts of land would be placed in the Zone 5 category. However, because this RLMP adjusts the Zone 2 lands to more accurately reflect the lands encumbered by road easements, the amount of land allocated to Zone 5 in the 2011 CVLP must be correspondingly decreased. .

Zone 6 (Developed Recreation)
The 2011 CVLP underestimated the amount of land designated for Zone 6. The planning team reviewed recreational trends and the possibility of expanding current recreation sites and proposed to slightly increase the amount of land proposed for allocation to Zone 6.

Zone 7 (Shoreline Access)
The 2011 CVLP underestimated the amount of former TVA property encumbered with shoreline access rights and a comprehensive survey of deed access rights determined that there are two parcels to allocate two parcels to Zone 7 in the draft RLMP.

Of the 3,604.8 acres on Nickajack Reservoir, there are no proposed allocation changes to 2,488.7 acres (69 percent); all proposed allocation changes involve 1,116.1 acres (31 percent). Of the 1,116.1 acres, TVA would allocate 664.8 acres (59.6 percent) to reflect existing land use agreements or commitments. The remaining 451.3 acres (40.4 percent) involve proposed parcel allocations that are not based on existing land use agreements or commitments. See Appendix B for parcel allocation description tables.

3.4 Property Administration

As stewards of public land, TVA uses the RLMP, along with TVA policies and guidelines, to manage resources and to respond to requests for the use of TVA land. Inquiries about or requests for the use of TVA land should be made to the TVA Public Land Information Center at 800-TVA-LAND or 800-882-5263 between 8 a.m. and 6 p.m. Eastern time Monday through Friday. Pursuant to the TVA Land Policy, TVA would consider changing a land use designation outside of the normal planning process only for the purpose of water access for industrial or commercial recreational operations on privately owned back-lying land or to implement TVA's SMP.

Additionally, there are a small number of TVA parcels in the Valley that have deeded access rights for shoreline access that are currently utilized for other uses such as commercial recreation and industrial. Should the private back-lying land become residential, a request for a change of allocation of the parcel to Zone 7 (Shoreline Access) would be subject, with the appropriate environmental review, to action by the TVA Board or its designee or to Board-approved policy.

Consistent with the TVA Land Policy, those parcels or portions of parcels that have become fragmented from the reservoir may be declared surplus and sold at public auction. Public works/utility projects, such as easements for pipelines, power or communication wires, roads, or other public infrastructure, proposed on TVA land that would not substantially change the zoned land use or adversely impact sensitive resources would not require an allocation change as long as such projects would be compatible with the use of the allocated zone. Proposed public works/utility projects would be subject to a project-specific environmental review. Any other

requests involving a departure from the planned uses would require appropriate approval. Proposals consistent with TVA's policies and the allocated use, and otherwise acceptable to TVA, will be reviewed in accordance with NEPA and must conform to the requirements of other applicable environmental regulations and other legal authorities.

This page intentionally left blank

CHAPTER 4. PARCEL DESCRIPTIONS

This chapter describes the use determined to be most suitable for each parcel of TVA land as shown on the plan maps (Appendix A, Panels 1 through 5). The parcel descriptions include the acreage rounded to the nearest tenth and the proposed land use. Relevant data regarding the proposed use are provided for each tract and include existing land uses, physical characteristics of the land, presence of existing private water use facilities, and any special considerations related to the future use. All existing private water use facilities with TVA permits are grandfathered, provided they are constructed in accordance with the plans approved by TVA.

Parcel 1 - (895.5 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is the Nickajack Dam Reservation and receives heavy public use. Existing facility development includes the dam powerhouse and associated access roads, transmission lines and substations; navigation lock and associated access roads and mooring cells; roads; boat ramp; and campground.

Apart from serving Nickajack Dam, this parcel provides an excellent public use opportunity. The southern bank portion of this parcel consists of a day use recreation area with a boat ramp. On northern portion of this parcel, there is another boat ramp and a picnic area. Bald eagles previously had a nest within this parcel, however it is no longer active. However, bald eagle pairs still nest in the area and have created multiple nests within 660 feet of this parcel throughout the last several decades. This parcel has a medium probability for the presence of cultural resources, but it has not been adequately surveyed. Requests for private water use facilities would not be considered.

Table 4-1. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SW,100–SE, 101–NW, and 101–NE
TVA D-Stage Map Numbers	1 and 2
Stream Mile and Bank	TRM 423 to 425B
Land Use/Land Cover	Mixture of deciduous forest, maintained lawns, road right-of-way, and water control structures
Known Dispersed Recreation Opportunities	Hiking, camping, and bank fishing

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	Revocable license to the Shellmound Campground for public recreation
Potential Projects	None Identified
Potential Partners	Shellmound Campground

Parcel 2 - (3.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel is adjacent to former TVA property (Tract No. XNJR-21) that was sold for residential and recreational development. The downstream section of the tract fronts two developed recreation areas: Shellmound Campground and Shellmound Day Use Area. Both of these areas were initially developed by TVA in the 1970s. The amenities at Shellmound Campground include 33 campsites, play fields, and play equipment. The Shellmound Campground is currently operated under a commercial recreation license agreement.
The Shellmound Day use area is currently operated by TVA. Facilities include a swimming beach, picnic area with pavilions and individual picnic tables, a boat ramp, two fishing piers, walking trail, and play equipment. This area attracts a high level of use during the recreation season and is also used for special events such as the annual Fall Color Cruise. These two areas are located south of Interstate 24 on TVA Road. This parcel has a low probability for the presence of cultural resources. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-2. Parcel Information

Location Component	Parcel Specific Information
County, Stage	Marion, Tennessee
TVA D−Stage Map Numbers	1
Stream Mile and Bank	TRM 425.5R

Parcel 2a - (5.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This narrow parcel is located adjacent to a former TVA property (Tract No. XNJR-21) that was sold for residential and recreational development. TVA placed certain development requirements along this portion of the former TVA property. If these development requirements are not met within a certain grace period, TVA retains the right to re-enter this portion of the property. At the time of the draft RLMP, the grace period was ongoing.

Pursuant to the development requirements, the back-lying property owners do not have the necessary access rights to request individual private water use facilities. However, requests for facilities supporting developed recreation would be considered.

Table 4-3a. Parcel Information

Location Component	Parcel Specific Information
County, Stage	Marion, Tennessee
TVA D−Stage Map Numbers	1
Stream Mile and Bank	TRM 425.8R

Parcel 3 - (46.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This narrow parcel is located adjacent to former TVA property (Tract No. XNJR-21) that was sold for residential and recreational development. At the time of the draft RLMP, only three residential homes had been constructed on the former TVA property. These back-lying property owners do not have the necessary access rights to request individual private water use facilities. However, requests for facilities supporting developed recreation would be considered.

Table 4-4. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE
TVA D-Stage Map Numbers	1 and 3
Stream Mile and Bank	TRMs 426 to 427R
Land Use/Land Cover	Mixture of deciduous forest and maintained lawns
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Revocable license to a private individual for a small game habitat
Potential Projects	None identified
Potential Partners	None identified

Parcel 4 - (335.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel consists of Little Cedar Mountain proper and two small natural areas. The main parcel consists of the Little Cedar Mountain Trail, Little Cedar Mountain SMA, and HPA. The Little Cedar Mountain Trail is named for the prominence of red cedar in the forest which the trail traverses and features a 4-mile long loop along the steep limestone outcroppings and bluffs of Nickajack Reservoir, winding through the Little Cedar Mountain SWA and HPA.

The parcel contains significant cultural resources, including a unique early rural roadway with stone retaining walls and stone paving. This historic area is further enhanced by stone fence lines, cedar hedge rows and a pair of large cedar trees marking a lane entrance off the road. This predominantly forested parcel contains two distinctive “glade-like” openings providing good wildlife habitat. Grays Bluff, overlooking the reservoir, provides a major geological feature. This parcel contains numerous rare plants, rare animals, and three cave systems. Gray bats, Allegheny woodrat, Nevius’ stonecrop, Svenson’s wild rye, Great Plains ladies tresses, hairy false gromwell, spreading rock cress, cylindric blazing star, and John Becks leaf cup can be found on this parcel. The Little Cedar Mountain Cave has been used by gray bats in the past, though recent surveys have not documented use of this cave by gray bats.

This parcel consists of a mixture of upland hardwoods, pines, and red cedar. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. Requests for private water use facilities would not be considered.

Table 4-5. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE
TVA D-Stage Map Numbers	3
Stream Mile and Bank	TRMs 427 to 429R
Land Use/Land Cover	Mature upland hardwoods, pine, and red cedar
Known Dispersed Recreation Opportunities	Hiking
Current Agreements/Commitments	Revocable license to a private individual for a small game habitat
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA’s property Boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 5 - (174.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses four non-contagious tracts of land and contains portions of the ROW for Interstate 24, State Route (SR) 134, SR-156, and U.S. Highway (US) 41. This parcel also provides a ROW for a transmission line crossing over Interstate 24, SR-156, and SR-134, and a small electrical substation. On the largest island that Interstate 24 passes through, the State of Tennessee has constructed a visitor center and rest area. Creeping St John’s wort (*Hypericum*

adpressum), a state-listed endangered species, has been recorded here. This parcel has a low probability for the presence of cultural resources. It is, however, adjacent to parcels that have higher probability for cultural resources.

The intent of this parcel is to support the road and transmission line ROWs. In locations where the ROWs and wildlife management or public recreation are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered.

Table 4-6. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE
TVA D-Stage Map Numbers	3, 5, 6, and 6–1
Stream Mile and Bank	TRMs 429 to 429.8B
Land Use/Land Cover	Mixture of deciduous forest, road right-of-way, and transmission right-of-way
Known Dispersed Recreation Opportunities	Wildlife observation and bank fishing
Current Agreements/Commitments	Permanent easement to the State of Tennessee for a bridge and roadway
Potential Projects	None Identified
Potential Partners	State of Tennessee

Parcel 6 - (66.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Management

This parcel consists of six non-contiguous tracts of land and is adjacent to road ROWs. The northwest portion of this parcel receives heavy informal recreation, aquatic bed wetland are located along the shoreline. Parcel 5 bisects the two largest islands. The largest island provides a great opportunity for wildlife observation and bank fishing.

The northwest portion of this parcel has a high probability for the presence of cultural resources. The central three islands have a medium probability for the presence of cultural resources. A heronry has been recorded on the smallest island. The portion of the property associated with Parcel 5 has a low probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-7. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE
TVA D-Stage Map Numbers	3 and 6
Stream Mile and Bank	TRMs 428 to 429.2R
Land Use/Land Cover	Upland hardwoods and wetlands
Known Dispersed Recreation Opportunities	Wildlife observation and bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property Boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 7 - (406.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Management

This large parcel is located along the right descending bank of the Tennessee River. Parcel 7 is adjacent to the Marion Memorial Bridge HPA and the ROW for US 41. Residential development surrounds this parcel on three sides. The parcel contains some original TVA acreage in addition to a tract of land that was acquired through the Nickajack Shores Development exchange in 2005. The mature upland hardwoods on this parcel provides high-quality habitat for a variety of forest-dependent wildlife. The terrain of the parcel consists of steep areas and a large ridgetop with some areas of gentle slope. This parcel provides a unique habitat for plants and animals. Walk-in access is via one road on the north side of the tract off of Lock and Dam Road. This parcel has a series of old logging roads which facilitates hiking and hunting access throughout this tract. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-8. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE
TVA D-Stage Map Numbers	1–A, 3, and 5
Stream Mile and Bank	TRMs 429.2 to 431R
Land Use/Land Cover	Upland hardwood

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Hiking, hunting, and primitive camping
Current Agreements/Commitments	• Permanent easement to a private individual for a roadway • Permanent easement to Marion County, Tennessee for a school facility
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property Boundary • Systematic survey for historic properties
Potential Partners	Marion County, Tennessee

Parcel 8 - (43 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is managed by Marion County, Tennessee, under a permanent recreation easement (Tract No. XTNJR-14RE). Amenities include two boat ramps, campground, picnic facilities, and a fishing pier. The parcel is accessible via US 41. This parcel has a low to medium probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-9. Parcel Information

Location Component	Parcel Specific Information
County, State	Marion, Tennessee
TVA D−Stage Map Numbers	5
Stream Mile and Bank	TRM 429.5R

Parcel 9 - (458.0 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This large parcel is known as Cedar Mountain. It consists of the Marion Bridge HPA and a tract of land that was acquired through the Nickajack Shores Development exchange in 2005. The mature upland hardwoods on this parcel provides high-quality habitat for a variety of forest-dependent wildlife. The steep shoreline (bluff) on the eastern portion of the parcel provides a unique habitat for plants and animals. Walk-in access is via two roads on the northeast side of the tract off of Lock and Dam Road. This parcel has a series of old logging roads which facilitates hiking and hunting access throughout this tract.

Several species of state-listed plants have been recorded on this parcel such as American smoke-tree and creeping St. John's wort and there is suitable habitat for John Becks leafcup.

Two caves are located within this parcel, however, no threatened and endangered species are known to occur in these caves. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed. No existing authorized shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-10. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE
TVA D-Stage Map Numbers	1–A and 5
Stream Mile and Bank	TRMs 429.5 to 431R
Land Use/Land Cover	Mature upland hardwoods
Known Dispersed Recreation Opportunities	Hunting and Hiking
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property Boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 10 - (48.2 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is located along the right descending bank of the Tennessee River. This entire parcel is under easement to the Tennessee Consolidated Coal Company. This industrial site includes the remainder of the old Hales Bar Lock. This parcel has not been surveyed for cultural resources. It has a medium to high probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4-11. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE
TVA D-Stage Map Numbers	1 and 1–A
Stream Mile and Bank	TRM 430.9 to 431.4R
Land Use/Land Cover	Upland hardwood
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Tennessee Consolidated Coal Company

Parcel 11 - (25.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This narrow linear parcel provides the ROW for the old Hales Bar Lock and Dam Road. This parcel will continue to be maintained to protect the historical integrity of the roadway. One population of the state-listed plant hairy false gromwell was recorded on this parcel in the early 1990s. This parcel has a medium probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-12. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE
TVA D-Stage Map Numbers	1 and 1–A
Stream Mile and Bank	TRM 430.9R
Land Use/Land Cover	Mixture of deciduous forest and road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 12 - (3.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel fronts former TVA property (Tract No. XTHBA-1) transferred to the State of Tennessee for public recreation. Amenities include a boat ramp. The parcel is accessible via SR-27 and Bennetts Lake Road. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-13. Parcel Information

Location Component	Parcel Specific Information
County, State	Marion, Tennessee
TVA D−Stage Map Numbers	2
Stream Mile and Bank	TRM 432.5R

Parcel 13 - (8.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of the Tennessee River and fronts former TVA property (Tract No. XTHBA-2) transferred to the State of Tennessee for public recreation. This parcel has a medium probability for the presence of cultural resources, but it has not been adequately surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-14. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	105–SW
TVA D-Stage Map Numbers	3
Stream Mile and Bank	TRM 435.7R
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	Revocable license the State of Tennessee for vegetation management
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property Boundary • Systematic survey for historic properties
Potential Partners	State of Tennessee

Parcel 14 - (2.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel adjoins former TVA property (Tract No. XTHBA-3) transferred to the State of Tennessee for public recreation. Amenities include a boat ramp. Suck Creek Road provides access to this area. The undeveloped portions of this parcel have a medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4-15. Parcel Information

Location Component	Parcel Specific Information
County, State	Hamilton, Tennessee
TVA D−Stage Map Numbers	11
Stream Mile and Bank	TRM 453.5R

Parcel 15 - (1.2 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This narrow parcel is located along the left descending bank of the Tennessee River near Chattanooga Industrial Park. This industrial parcel currently has approved water use facilities located along the shoreline. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4-16. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Hamilton, Tennessee
Topographic Map (Sheet No. and Quadrant)	105–SE
TVA D-Stage Map Numbers	14 and 17
Stream Mile and Bank	TRM 462.1L
Land Use/Land Cover	Upland hardwoods and open shoreline
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Approved water use facilities

Parcel 16 - (38.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Huff Branch HPA. The land cover consists of mixed hardwoods and scattered pines. Populations of the state-listed ginseng and the federally listed large-flowered skullcap are known to occur on this parcel. This is one of two parcels where the large-flowered skullcap has been recorded on Nickajack Reservoir.

This parcel has a high probability for the presence of cultural resources, but has not been adequately surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-17. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	105–SW
TVA D-Stage Map Numbers	5 and 6
Stream Mile and Bank	TRMs 440.7 to 441.9L
Land Use/Land Cover	Mixed hardwoods and scattered pines
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property Boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 17 - (12.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for US 41. While portions of the parcel are adjacent to TVA property allocated for other purposes, the intent of this parcel is support the road ROWs. This parcel has a low probability for the presence of cultural resources, but it is adjacent to parcels with medium and high probability for cultural resources. Large-flowered skullcap, a federally listed plant species, was recorded on this parcel in 1987. Requests for private water use facilities would not be considered.

Table 4-18. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	105–SW
TVA D-Stage Map Numbers	4, 5, and 6
Stream Mile and Bank	TRM 430.9R
Land Use/Land Cover	Mixture of deciduous forest and road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to the State of Tennessee for a roadway
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 18 - (73.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Management

This parcel consists of eight non-contagious tracts of land: four shoreline tracts and four adjacent islands. Mullin's Cove Riverfront Estates is along the back-lying property of the northern most portion of this parcel. However, the property owners do not have the necessary deeded access rights for private water use facilities and requests for such facilities would not be considered.

The entire parcel is located within the Tennessee River Gorge. The current land cover is upland hardwoods with areas of open shoreline. However, aquatic wetlands, scrub-shrub, and emergent wetlands can be found along the shoreline of this parcel. This parcel contains numerous informal access areas to the shoreline. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed.

Table 4-19. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	105–SW
TVA D-Stage Map Numbers	4 and 5
Stream Mile and Bank	TRMs 437.2 to 441L
Land Use/Land Cover	Upland hardwoods, open shoreline, aquatic beds, and emergent wetlands
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property Boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 18a - (0.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River and lies entirely below the 640-foot msl contour. The current land cover is primarily deciduous forest with maintained lawns. This parcel has a medium probability for the presence of cultural resource, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for water-use facilities would be considered.

Table 4-20. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	105–SW
TVA D-Stage Map Numbers	4
Stream Mile and Bank	TRM 437.3R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	None
Structure Profile	None
Current Agreements/Commitments	Approved water use facilities

Parcel 19 - (4.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel was developed by TVA during the 1970s for public recreation. Amenities include a boat ramp and courtesy pier. The parcel is accessible via US 41. The undeveloped portion of this parcel has a medium probability for the presence of cultural resources. It has not been adequately surveyed for cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-21. Parcel Information

Location Component	Parcel Specific Information
County, State	Marion, Tennessee
TVA D−Stage Map Numbers	5
Stream Mile and Bank	TRM 439.8L

Parcel 20 - (0.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This shoreline parcel was formerly licensed to Walker Marina, and this commercial recreation facility is not currently in operation. Amenities include a boat ramp and fishing pier. A commercial recreation operation could be reestablished in the future; therefore, this parcel is retained for recreation development. Access to the area is via US 41. This parcel has a low to medium probability for the presence of cultural resources, but it has not been surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-22. Parcel Information

Location Component	Parcel Specific Information
County, State	Marion, Tennessee
TVA D−Stage Map Numbers	4
Stream Mile and Bank	TRM 438.1L

Parcel 21 - (0.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the left descending bank of the Tennessee River. This parcel lies entirely below the 640-foot msl contour. The current land cover is primarily mixed pine and hardwood trees with maintained lawns. This parcel has a medium probability for the presence of cultural resource, but it has not been surveyed. Water use facilities have been permitted along the shoreline, and future requests for water-use facilities would be considered.

Table 4-23. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	105–SW
TVA D-Stage Map Numbers	4
Stream Mile and Bank	TRM 438L
Land Use/Land Cover	Mixed pine and hardwood trees with maintained lawns
Fronts Former TVA Tract (s)	XHBA–3
Structure Profile	645-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 22 - (30.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Management

This parcel includes a 5-mile string of islands along both descending banks of the Tennessee River. Many of the tracts are fronted by aquatic bed, emergent and scrub-shrub wetlands, however, the primary land cover for this tract is mixed upland hardwoods and bottomland hardwoods. Three heronries have been documented on these islands. This parcel has a medium to high probability for the presence of cultural resources, but it has not been adequately surveyed. No existing authorized shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-24. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE and 105–SW
TVA D-Stage Map Numbers	1, 2, and 3
Stream Mile and Bank	TRMs 431.2 to 436L
Land Use/Land Cover	Upland hardwoods, bottomland hardwoods, and emergent wetlands
Known Dispersed Recreation Opportunities	Hunting and fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Systematic survey for historic properties
Potential Partners	None identified

Parcel 23 - (37.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Management

This parcel is located along the left descending bank of the Tennessee River. The primary land cover of the tract is upland hardwoods with aquatic beds and emergent wetlands along the shoreline. This parcel has a medium probability for the presence of cultural resources, but it has not been surveyed. No existing authorized shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-25. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE
TVA D-Stage Map Numbers	1
Stream Mile and Bank	TRM 432.2L
Land Use/Land Cover	Upland hardwoods and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property Boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 24 - (19.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is the old Hales Bar Dam. This parcel is also adjacent to former TVA property (Tract No. XNJR-8) sold for commercial recreation, and the sale included the old Hales Bar Dam powerhouse facility. Currently, the recreation facilities present include a boat ramp, fishing piers, picnic facilities, full service campground, boat storage, and marina services. This area is accessible via Hales Bar Road.

The downstream portion of this parcel includes a TVA developed and maintained boat ramp. The facility includes a paved parking lot with 40 parking spaces, a 30 foot wide boat ramp, and courtesy pier.

The developed portions of this parcel have a low probability for the presence of archaeological resources. The undeveloped portions, particularly at the extreme north and southern ends, have a medium probability for the presence of archaeological resources. The remnants of the Hales Bar Dam have significant historical importance. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-26. Parcel Information

Location Component	Parcel Specific Information
County, State	Marion, Tennessee
TVA D−Stage Map Numbers	1 and 5
Stream Mile and Bank	TRM 431L

Parcel 25 - (25.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for US 41 locally known as Dixie Highway West. The intent of this parcel is support the road ROWs. The road itself has a low probability for the presence of cultural resources. Areas adjacent to the road, however, have a medium probability for the presence of cultural resources and have not been surveyed. In locations where the road ROWs and developed recreation are complementary, requests to support the back-lying recreation would be considered. Requests for private water use facilities would not be considered.

Table 4-27. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE

Location Component and Public Involvement Opportunities	Parcel Specific Information
TVA D-Stage Map Numbers	1 and 5
Stream Mile and Bank	TRMs 430.5 to 431.4L
Land Use/Land Cover	Mixture of deciduous forest and road right-of-way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to the State of Tennessee for roadway
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 26 - (19.9 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is located along the left descending bank of the Tennessee River. This parcel has a permanent easement to Serodino, Inc. for an industrial site. Barge terminals have also been constructed along the shoreline. Most of this parcel has been disturbed by industrial activity. Areas of this parcel that have not been disturbed have a medium probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4-28. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE
TVA D-Stage Map Numbers	5
Stream Mile and Bank	TRM 430.1 to 430.4L
Land Use/Land Cover	Upland hardwood
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Serodino for an industrial site

Parcel 27 - (22.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Management

This parcel is located along the left descending bank of the Tennessee River near the community of Haletown. The primary land cover is upland hardwoods with aquatic beds along the shoreline. This parcel has a high probability for the presence of cultural resources, but it has not been adequately surveyed. No existing authorized shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-29. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE
TVA D-Stage Map Numbers	5 and 6–1
Stream Mile and Bank	TRM 430L
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Agricultural license for crop production
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property Boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 28 - (0.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along the left descending bank of the Tennessee River in the Guild and Haletown community. This parcel supports the Marion County fire station. The undisturbed portion of this parcel has a medium to high probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4-30. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE
TVA D-Stage Map Numbers	5
Stream Mile and Bank	TRM 430L
Land Use/Land Cover	Deciduous hardwoods, maintained lawns, and a fire station
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Marion County, Tennessee for a fire station
Potential Projects	None identified
Potential Partners	Marion County, Tennessee

Parcel 29 - (3.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is adjacent to Anchor Inn Bait and Tackle, and is the recreation facility is operated under a revocable recreation license. Facilities and services at this recreation area include a boat ramp, picnic facilities, marine fuel sales, and shipstore. This parcel is adjacent to US 41. This parcel has a low probability for the presence of cultural resources, but it has not been adequately surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-31. Parcel Information

Location Component	Parcel Specific Information
County, State	Marion, Tennessee
TVA D−Stage Map Numbers	5
Stream Mile and Bank	TRM 429.7L

Parcel 30 - (46.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Management

This parcel consists of eight non-contiguous tracts of land along the left descending bank of the Tennessee River. This parcel is mainly narrow strips of land located along Interstate 24, US 41, and SR-134. The portion of the parcel near Running Water Creek is predominantly emergent wetland. These types of wetland areas are limited on Nickajack Reservoir and provide excellent habitat for wading birds and migratory waterfowl. This parcel provides wildlife observation. This parcel has a medium to high probability for the presence of cultural resources, but it has not been adequately surveyed. Request for water use facilities would not be considered.

Table 4-32. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE
TVA D-Stage Map Numbers	1, 6, and 6–1
Stream Mile and Bank	TRMs 429 to 429.7L
Land Use/Land Cover	Upland hardwoods and emergent wetlands
Known Dispersed Recreation Opportunities	Wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property Boundary • Systematic survey for historic properties
Potential Partners	None Identified

Parcel 31 - (23 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel has a recreation area that is currently closed due to shallow water and siltation around the boat launching ramp. Running Water Public Use Area was developed and operated by TVA and its operation was transitioned to private management via revocable license agreement. Amenities include boat ramp, campground, picnic area, and swimming beach. With some facility modification, this recreation area could re-open and meet anticipated future recreation needs. The area is accessible via Interstate 24.

This area has a medium to high probability for the presence of cultural resources, but it has not been surveyed. Although not part of this parcel, there is one known historic cemetery near the parcel. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-33. Parcel Information

Location Component	Parcel Specific Information
County, State	Marion, Tennessee
TVA D−Stage Map Numbers	6
Stream Mile and Bank	TRM 429L

Parcel 32 - (15.2 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel consists of three non-contiguous tracts of land along the left descending bank of the Tennessee River. The parcel supports a railroad ROW. The primary land cover is sparse deciduous hardwoods with emergent wetlands along the shoreline. The railroad bed itself has a low probability for the presence of cultural resources. There are, however some portions of this parcel that have a medium probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4-34. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE and 101–NE
TVA D-Stage Map Numbers	4 and 6
Stream Mile and Bank	TRMs 426.5 to 428.9L
Land Use/Land Cover	Deciduous forest

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to L and N Railroad

Parcel 33 - (110.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

The Shellmound Road Bluff HPA is on Parcel 33. The parcel contains a forested steep slope and bluffs which supports a mature stand of the state-listed American smoke-tree. The land cover type is mature upland hardwoods with scattered pines, and small stands of pine.

A gravel road entering from the south bisects the northwest side of the parcel and provides public access. Bank fishing, hunting, and camping are the primary uses of this parcel. An active bald eagle nest is known within 660 feet of this parcel along a TVA transmission line ROW. This parcel has a medium to high probability for the presence of cultural resources, but it has not been surveyed. There is at least one known cemetery present. No existing authorized shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-35. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SE
TVA D-Stage Map Numbers	4 and 6
Stream Mile and Bank	TRMs 427 to 429L
Land Use/Land Cover	Upland hardwoods and pined
Known Dispersed Recreation Opportunities	Hunting, bank fishing, camping
Current Agreements/Commitments	• Revocable license to CSX Transportation, Inc. for vegetation management and stabilization • Permanent easement to Marion County for roadway
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property Boundary • Systematic survey for historic properties
Potential Partners	• Marion County, Tennessee • CSX Transportation Inc.

Parcel 34 - (123.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Management

This parcel consists of four non-contiguous tracts of land located along the left descending bank of the Tennessee River. The upstream portion of this parcel is fronted by the railroad and SR 156. The southern portion of this parcel is adjacent to the Nickajack Cave HPA and is also at the head of Cole City Creek embayment. Aquatic bed wetlands are located along the shoreline and the primary land cover of this parcel is upland hardwoods. This entire parcel provides good habitat for forest-dependent wildlife and also for migratory waterfowl. This parcel has a medium to high probability for the presence of cultural resources, but it has not been adequately surveyed. This parcel either includes or is immediately adjacent to multiple cemeteries. Requests for water use facilities would not be considered.

Table 4-36. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee Dade, Georgia
Topographic Map (Sheet No. and Quadrant)	100–SE and 101–NE
TVA D-Stage Map Numbers	2 and 4
Stream Mile and Bank	TRMs 425.5 to 427.1L
Land Use/Land Cover	Upland hardwoods and aquatic bed wetlands
Known Dispersed Recreation Opportunities	Bank fishing and wildlife observation
Current Agreements/Commitments	Permanent easement to a private individual for a driveway
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property Boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 35 - (44.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for SR-156, locally known as Old Ladds Road and a transmission line. This parcel also includes the TVA developed Cole City Creek boat ramp. The road has a low probability for the presence of cultural resources. The transmission line ROW has a medium probability for the presence of cultural resources. In locations where the road or transmission line ROWs and public recreation are complementary, requests to support the

back-lying public recreation would be considered. Requests for private water use facilities would not be considered.

Table 4-37. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	101–NE and 101–NW
TVA D-Stage Map Numbers	2 and 4
Stream Mile and Bank	TRMs 424.5 to 426.5L
Land Use/Land Cover	Deciduous hardwoods and maintained lawns
Known Dispersed Recreation Opportunities	Bank fishing and boat ramp
Current Agreements/Commitments	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property Boundary • Systematic survey for historic properties
Potential Projects	None identified
Potential Partners	State of Tennessee

Parcel 36 - (411.7 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

The Nickajack Cave HPA is on a portion of this parcel. This large tract consists of a mixed pine-hardwood forest and provides a wooded buffer for Nickajack Cave. The Nickajack Cave supports a maternity colony of the federally listed gray bat and this cave is listed as a Priority 3 cave in the Gray Bat Recovery Plan. Within the cave there are historic records of the listed species southern cave fish, Tennessee cave salamander, Allegheny woodrat, the Nickajack cave beetle, Indiana bat, and eastern small-footed bat. One other cave occurs on this parcel but no federally or state-listed species have been recorded within it.

While the pine and hardwood forest provide protections for Nickajack Cave, the parcel also provides excellent habitat for forest-dependent wildlife. This parcel has a high probability for the presence of cultural resources, but it has not been adequately surveyed. No existing authorized shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-38. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee Dade, Georgia
Topographic Map (Sheet No. and Quadrant)	101–NE and 101–NW
TVA D-Stage Map Numbers	2
Stream Mile and Bank	TRMs 424.1-425.7L
Land Use/Land Cover	Mixed upland hardwoods and pines
Known Dispersed Recreation Opportunities	Hiking and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 37 - (12.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel has the Maple View Public Recreation Area that was initially developed by TVA. The recreation area is currently operated by the City of New Hope under a revocable license agreement. The area includes a boat ramp, swimming beach, picnic facilities, walking trail and a viewing platform that overlooks the entrance to Nickajack Cave. The area is accessible via SR-156.

The undeveloped portion of this parcel has a high probability for the presence of cultural resources. This parcel has not been adequately surveyed for cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-39. Parcel Information

Location Component	Parcel Specific Information
County, State	Marion, Tennessee
TVA D−Stage Map Numbers	2
Stream Mile and Bank	TRM 425.5L

Parcel 38 - (1.0 acre)

Proposed RLMP Allocation: Zone 5, Industrial

Nickajack Port is located along the left descending bank of the Tennessee River on this parcel. This area has a permanent industrial easement to the Nickajack Port Authority. This parcel also fronts former TVA property (Tract No. XNJR-19). Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4-40. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SW
TVA D-Stage Map Numbers	2
Stream Mile and Bank	TRM 424L
Land Use/Land Cover	Deciduous Forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to the Nickajack Port Authority for a barge Terminal

Parcel 39 - (3.1 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along the left descending bank of the Tennessee River and is adjacent to the Nickajack Port. The primary land cover is upland hardwoods. This parcel has a high probability for the presence of cultural resources. No existing authorized shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-41. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marion County, Tennessee
Topographic Map (Sheet No. and Quadrant)	100–SW
TVA D-Stage Map Numbers	2
Stream Mile and Bank	TRM 423.9L
Land Use/Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Placement of TVA property and public lands signs along the parcel boundary and shoreline
Potential Partners	None identified

CHAPTER 5. PLANNING TEAM

Benjamin J. Bean

Position:	Program Manager, Reservoir Land Use and Permitting
Education:	M.S., Environmental Policy and Management; B.A., Biology
Experience:	10 years in Public Land Management and Permitting, 4 years in water quality, 2 years in environmental compliance monitoring
Involvement:	Planning Team and Deed interpretation

Chellye L. Campbell

Position:	Senior Specialist, Land Policy
Education:	B.S., Biology
Experience:	15 years in Planning and Managing Land
Involvement:	Deed interpretation and Land Policy guidance

Jerry G. Fouse

Position:	Recreation Specialist
Education:	M.B.A., B.S., Forestry and Wildlife
Experience:	39 years in Natural Resources – Recreation Planning and Economic Development
Involvement:	Planning Team and Recreation Management

Martin B. High

Position:	Program Manager, Natural Resource Management
Education:	B.S., Forest Management
Experience:	27 years in Natural Resource Management, Land Management, and Permitting
Involvement:	Planning Team and Natural Resource Management

Thomas O. Maher

Position:	Senior Archaeologist
Education:	Ph.D., Anthropology
Experience:	33 years in the field of Archaeology
Involvement:	Planning Team and Cultural Resource Management

Leonard L. McCurdy, Jr.

Position:	Senior Specialist, Reservoir Land Use and Permitting
Education:	J.D., Law; B.S., Environmental Studies - Chemistry
Experience:	26 years in the field of Law including 19 years in TVA real property rights
Involvement:	Deed interpretation and Land Policy guidance

Heather L. Montgomery

Position:	Senior Program Manager, Reservoir Land Planning
Education:	B.S., Environmental Biology
Experience:	14 years in Planning and Managing Land and Environmental Impacts Evaluation
Involvement:	Program Manager

Mark T. Morrissey

Position:	Geographic Analyst
Education:	B.S., Geography
Experience:	2 years in Planning and Managing Land; 5 years in Industrial Safety and Compliance
Involvement:	Document Preparation; Planning Team; and Preparation of Geographic information Systems

Karen E. Rylant

Position:	Senior Specialist, Section 26a Policy and Process
Education:	Ph.D., Agronomy (Soil Chemistry); M.S., Soil Fertility; B.A., Chemistry, B.A., Geology
Experience:	8 years in Environmental Research; 4 years in Land and Shoreline Management
Involvement:	Deed interpretation and Section 26a guidance

CHAPTER 6. LITERATURE CITED

Bachman, E.A., Jr. 1966. The Nickajack Dam Sites. Tennessee Archaeologist 22(1): 6-12.

Benson, A.J., D. Raikow, J. Larson, A. Fusaro, and A.K. Bogdanoff. 2016. Dreissena polymorpha. USGS Nonindigenous Aquatic Species Database, Gainesville, Florida. Retrieved from https://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=5 (accessed October 2016).

Driskell, B.N. and T.S. Mistovich. 1990. Cultural Resource Investigations in the Nickajack Reservoir Area, Marion County, Tennessee. With contributions by Eugene M. Futato. Office of Archaeological Research, Alabama State Museum of Natural History, University of Alabama. Report submitted to the Tennessee Valley Authority, Norris, Tennessee.

EDDMapS. 2016. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Retrieved from http://www.eddmaps.org/ (accessed October 2016).

Etnier, D. A. and W. C. Starnes. 1993. The Fishes of Tennessee. Knoxville: University of Tennessee Press.

Faulkner, C.H. and J.B. Graham. 1965. Excavations in the Nickajack Reservoir: Season 1. Tennessee Archaeological Society, Miscellaneous Paper 7.

———.1966a. Highway Salvage in the Nickajack Reservoir. Report on File, Department of Anthropology, University of Tennessee, Knoxville.

———.1966b. Westmoreland-Barber Site (40MIII), Nickajack Reservoir: Season II. Report on file, Department of Anthropology, University of Tennessee, Knoxville.

Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. 19+ vols. New York and Oxford.

Hilty, John. 2015. Illinois Wildflowers. Retrieved from http://www.illinoiswildflowers.info/ (accessed July 2016).

Homer, C.G., J.A. Dewitz, L. Yang, S. Jin, P. Danielson, G/ Xian, J. Coulston, N.D. Herold, J.D. Wickham, and K. Megown. 2015. Completion of the 2011 National Land Cover Database for the conterminous United States-Representing a decade of land cover change information. Photogrammetric Engineering and Remote Sensing, v. 81, no. 5, p. 345-354.

Kennedy, E. Dale and Douglas W. White. 2013. Bewick's Wren (Thryomanes bewickii), The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Lab of Ornithology; Retrieved from http://bna.birds.cornell.edu/bna/species/315 (accessed July 2016).

Ladybird Johnson Wildflower Center. 2013. Native Plant Information Network, NPIN. Lady Bird Johnson Wildflower Center at The University of Texas, Austin, Texas. Retrieved from http://www.wildflower.org/plants/ (accessed July 2016).

McDonough, T. A. and G. D. Hickman. 1999. "Reservoir Fish Assemblage Index Development - A Tool for Assessing Ecological Health in Tennessee Valley Authority Impoundment," in Assessing the Sustainability and Biological Integrity of Water Resources Using Fish Communities, 523-540. Edited by T. Simon. Washington, D.C.: CRC Press.

Moore, Clarence B. 1915. Aboriginal Sites on the Tennessee River. Journal of the Academy of Natural Sciences of Philadelphia, second series 16(3).

NatureServe. 2016. NatureServe Web Service. Arlington, Virginia. USA. Retrieved from http://services.natureserve.org (accessed July 2016).

TDEC. 2014. Tennessee Department of Environment and Conservation. TDEC Rare Species data viewer Retrieved from https://tn.gov/environment/article/tdec-dataviewers (accessed July 2016).

———. 2016. 2016 Draft 303(d) List. Retrieved from http://www.tennessee.gov/environment/article/wr-wq-water-quality-reports-publications (accessed August 2016).

Tennessee Exotic Pest Plant Council. 2009. TN-EPPC Invasive Exotic Pest Plants in Tennessee. December 2009 (2nd Edition). Retrieved from http://www.tneppc.org/ (accessed August 2016).

TVA. 1972. Tennessee Valley Authority. The Nickajack Project, "A Report on the Planning, Design, Construction, Initial Operations of the Nickajack Project", Technical Report Number 16, Knoxville, Tennessee.

———. 1990. Nickajack Reservoir Land Management Plan. Available at https://www.tva.gov/file_source/TVA/Site%20Content/Environment/Environmental%20Stewardship/Land%20Management/Land%20Plans/Nickajack%20RLMP.pdf.

———. 1999. Shoreline Management Initiative: An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley Final Environmental Impact Statement. Available at https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy.

———. 2005. Tennessee Valley Authority Recreation Strategic Plan: A Framework for Providing Recreation Opportunities On and Along the Tennessee River 2004-2005.

———. 2011. Natural Resource Plan and associated Natural Resource Plan Final Environmental Impact Statement, Volumes 1 and 2. Available at https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan.

———. 2016a. Tennessee Valley Authority Natural Heritage Database, Data Received 2016.

———. 2016b. Reservoir Health Ratings. Retrieved from https://www.tva.gov/Environment/Environmental-Stewardship/Water-Quality/Reservoir-Health-Ratings (accessed July 2016).

———. 2016c. Tennessee Valley Authority Reservoir Vital Signs Monitoring Program Fish Collections, Data Received 2016.

Tennessee Wildlife Resources Agency. 2016. Tennessee Watchable Wildlife. Nashville, Tennessee. Retrieved from http://www.tnwatchablewildlife.org/ (accessed July 2016).

U.S. Census Bureau. 2010a. U.S. Census Bureau Population Division. Annual Estimates of the Resident Population: April 2010-July 1, 2015, UT Center for Business and Economic Research, 2003.

———. 2010b. American Fact Finder 2010-2014 American Community Survey, 5-year estimates Retrieved from http://factfinder.census.gov/ (accessed July 2016).

———. 2015. Annual Estimates of the Resident Population: April 1, 2010-July 1, 2015. Retrieved from http://factfinder.census.gov/ (accessed July 2016).

USDA NRCS. 2016a. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Retrieved from http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed July 2016).

———. 2016b. The PLANTS Database National Plant Data Team, Greensboro, NC 27401-4901 USA. Retrieved from http://plants.usda.gov (accessed July 2016).

U.S. Department of the Interior. 2008. Reclamation: Managing Water in the West; Resource Management Plan, Navajo Reservoir Area, Colorado and New Mexico, Final Environmental Assessment and Finding of No Significant Impact, June 2008.

U.S. Environmental Protection Agency. 2013. Level III Ecoregions of the Continental United States: Corvallis, Oregon, U.S. EPA– National Health and Environmental Effects Research Laboratory, map scale 1:7,500,000. Retrieved from http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0ahUKEwjN9Xi4OTPAhWD5YMKHTkDB_4QFggeMAA&url=http%3A%2F%2Fpubs.usgs.gov%2Ftm%2F04%2Fc03%2Fvirtual_CD%2Fuseco.pdf&usg=AFQjCNFOhu4HNWA5olNUctydUYH9jCmkhQ (accessed July 2016).

U.S. Fish and Wildlife Service. 2016a. IPaC Trust Resources Report. Information, Planning and Conservation System. Retrieved from https://ecos.fws.gov/ipac/ (accessed October 2016).

U.S. Fish and Wildlife Service. 2016b. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Retrieved from http://www.fws.gov/wetlands (accessed July 2016).

U.S. Geological Survey. 2016. Land Cover Trends Project. Retrieved from http://landcovertrends.usgs.gov/main/ecoIndex.html (accessed July 2016).

This page intentionally left blank

GLOSSARY

acre	A unit measure of land area equal to 43,560 square feet
agricultural licensing	Some parcels or portions of parcels designated for other purposes or uses may also be suitable for interim agricultural licensing. These parcels have been identified using the criteria contained in TVA's agriculture instruction. Normal tenure for a TVA agricultural license is five years. Land with extreme erosion potential may not be licensed for agricultural use unless erosion and sediment controls, including the use of best management practices, can be successfully implemented. Further investigation and/or mitigation of adverse impacts to natural or cultural resources may be required prior to approval of license agreements.
cultural resources	Archaeological, historic, and architectural resources
dam reservation	Lands generally maintained in a park–like setting by TVA to protect the integrity of the dam structure, hydroelectric facilities, and navigation locks. The reservation also provides for public visitor access to the TVA dam facilities and recreation opportunities, such as public boat access, bank fishing, camping, picnicking, etc. Hunting is not typically allowed on dam reservations.
deciduous	Vegetation that sheds leaves in autumn and produces new leaves in the spring.
dispersed recreation	Recreation of an informal nature such as hunting, hiking, biking, bird watching, photography, primitive camping, bank fishing, and picnicking, and etc. that occur on TVA land. These activities are not associated with developed facilities although some improvements may occur for access, health and safety, or to protect the environment.
embayment	A bay or arm of the reservoir
emergent wetland	Wetlands dominated by erect, rooted herbaceous plants, such as cattails and bulrushes.
endangered species	A species in danger of extinction throughout all or a significant part of its range. Endangered species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.
Environmental Policy	A TVA Board–approved policy that communicates guiding principles to lead TVA successfully in the reduction of its environmental impact while continuing to provide reliable and competitively priced power to the Valley
floodplain	Any land area susceptible to inundation by water from any source by a flood of selected frequency. For purposes of the National Flood Insurance Program, the floodplain, as a minimum, is that area subject to one percent or greater chance of flooding (100–year flood) in any given year.
forest	Vegetation having tree crowns overlapping, generally forming 60 to100 percent cover.
Land Policy	A TVA Board–approved policy that guides retention, disposal, and planning interests in real property
mitigation	An action that either will result in avoidance or an effect or cause the results of an activity to be minor in significance

natural areas	Ecologically significant sites, lands set aside for particular management objectives, and lands that contain sensitive biological, cultural or scenic resources. The TVA natural area program includes small wild areas, habitat protection areas, wildlife observation areas, and ecological study areas.
plan tract	A numbered parcel of TVA fee–owned land that has been assigned, through the reservoir land planning process, an allocation to guide future land use decisions.
prime farmland	Generally regarded as the best land for farming, these areas are flat or gently rolling and are usually susceptible to little or no soil erosion. Prime farmland produces the most food, feed, fiber, forage, and oil seed crops with the least amount of fuel, fertilizer, and labor. It combines favorable soil quality, growing season, and moisture supply and, under careful management, can be farmed continuously and at a high level of productivity without degrading either the environment or the resource base. Prime farmland does not include land already in or committed to urban development, roads, or water storage.
riparian	Related to or located on the banks of a river or stream
scrub–shrub	Woody vegetation less than about 20 feet tall. Species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions
shoreland	The surface of land lying between the minimum pool elevation of a TVA reservoir and the maximum shoreline contour or TVA back–lying property (whichever is further)
shoreline	The line where the water of a TVA reservoir meets the shore when the water level is at the normal summer pool elevation.
shoreline access rights	TVA land encumbered with deeded or implied rights held by adjacent property owners. The deeded or implied rights allow individuals to construct water use facilities upon receipt of TVA's written approval of plans.
threatened species	A species threatened with extinction throughout all or a significant portion of its range or territory. Threatened species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.
wetlands	As defined in TVA Environmental Review Procedures, "Wetlands are those areas inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances do or would support a prevalence of vegetation or aquatic life that requires saturated or seasonably saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, mud flats, and natural ponds.
wildlife management area	Land and/or water areas designated by state wildlife agencies, such as the Tennessee Wildlife Resources Agency, for the protection and management of wildlife. These areas typically have specific hunting and trapping regulations as well as rules regarding appropriate uses of these areas by the public.

INDEX

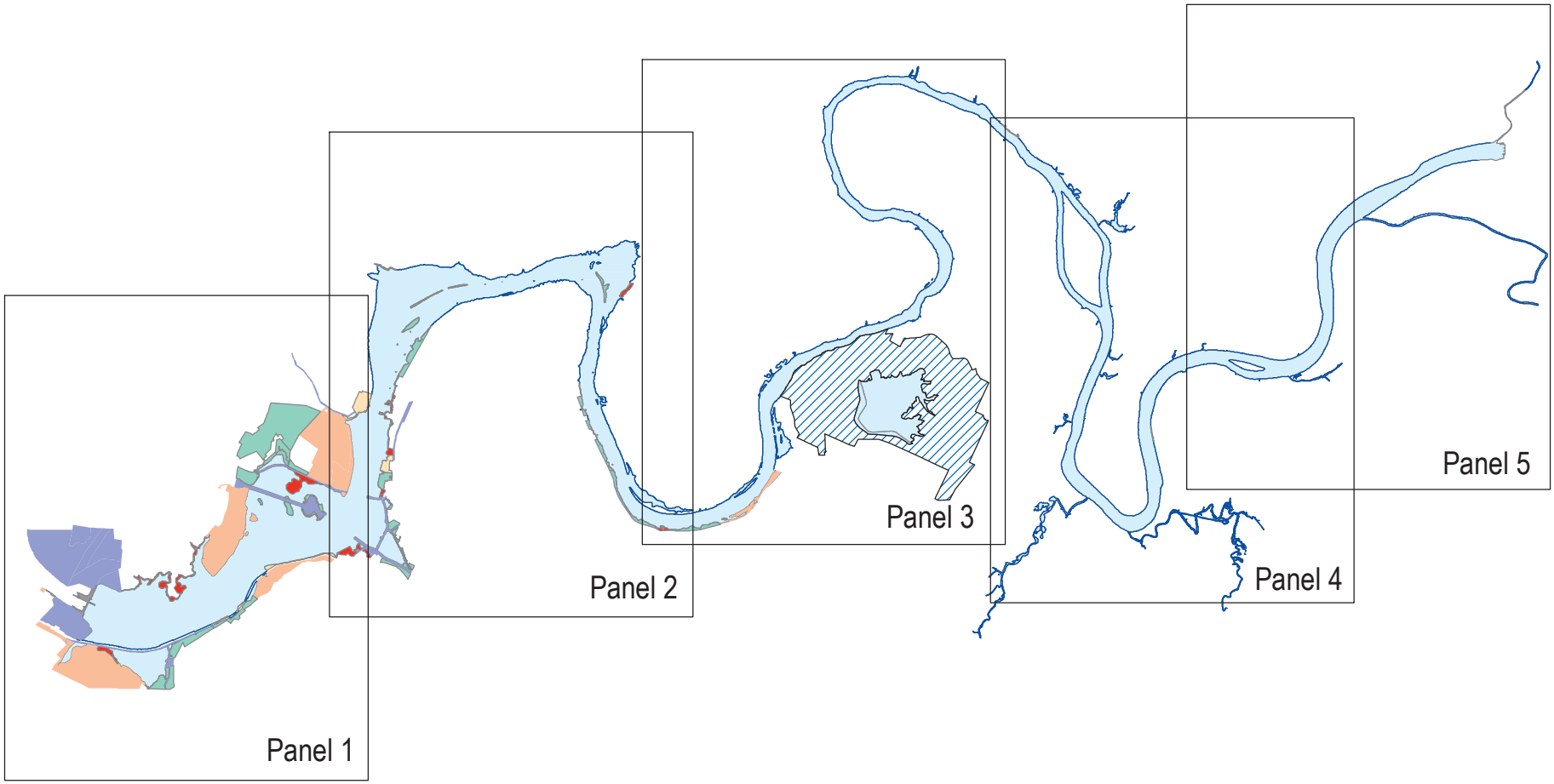
Advisory Council on Historic Preservation 40
Alabama 9, 10, 42, 95
aquatic ecology ..... i, 20, 23
archaeological resource 41, 54, 83
area of potential effect ..... iii, 40
back-lying land 64
best management practice 99
Chickamauga 10, 24, 33, 36, 39, 42, 44, 52
Committed land 57
Comprehensive Valleywide Land Plan ..... iii, 6, 7, 53, 62, 63, 64
cultural resource 40, 41, 59, 63, 67, 68, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 99
deeded access 64, 79
developed recreation . 6, 12, 13, 14, 39, 46, 47, 56, 59, 61, 62, 63, 68, 69, 73, 75, 76, 80, 83, 86, 87, 91
dissolved oxygen 35
ecologically significant site 43, 100
endangered species ..... i, 5, 23, 24, 28, 59, 71, 74, 99, 100
environmental impact statement ..... iii, 1, 96
Executive Order ..... iii, 18, 48
fish ..... ii, iii, 21, 23, 25, 33, 36, 54, 90, 96, 97
flood 2, 10, 11, 37, 39, 42, 50, 53, 99
floodplain 11, 31, 39, 99
flowage easement 11, 53
industrial ... 6, 11, 12, 23, 36, 37, 39, 43, 45, 46, 47, 53, 55, 56, 58, 59, 61, 62, 63, 64, 74, 77, 84, 87, 92, 94
Kentucky 9, 16
land use i, ii, iii, 3, 6, 11, 12, 37, 39, 42, 46, 47, 53, 54, 57, 58, 59, 62, 64, 67, 69, 70, 71, 72, 74, 75, 76, 77, 78, 79, 80, 81, 82, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 100, 107
maximum shoreline contour 100
mitigation 99
mussel 23, 25
National Environmental Policy Act (NEPA) ..... iii, 24, 43, 48, 53, 65
National Historic Preservation Act ..... iii, 40, 41, 43
National Park Service 17, 52
National Register of Historic Places ..... iii, 40, 43, 54
natural area 44, 54, 55, 56, 59, 69, 100
Nickajack ... i, ii, iii, 1, 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 23, 24, 25, 28, 30, 31, 32, 33, 35, 36, 37, 38, 39, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 58, 59, 60, 61, 62, 63, 64, 67, 69, 72, 73, 77, 86, 89, 90, 91, 92, 95, 96, 107, 108, 109
plant communities 19, 20
prime farmland ..... i, ii, 11, 12, 100
recreation ... i, ii, 5, 6, 11, 12, 13, 14, 15, 38, 39, 46, 47, 50, 52, 54, 55, 56, 57, 59, 60, 61, 62, 63, 64, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 96, 99
Reservoir Land Management Plan 1, iii, 1, 6, 7, 11, 12, 13, 14, 15, 18, 23, 28, 31, 33, 35, 37, 38, 39, 40, 46, 47, 49, 53, 57, 59, 61, 62, 63, 64, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 96

residential development 11
residential water use facilities 57
scoping 1
Section 106 of the National Historic Preservation Act 40
Section 26a of the TVA Act 11, 36, 53
sensitive resource .. 5, 6, 12, 14, 28, 30, 32, 33, 46, 52, 54, 55, 57, 58, 59, 61, 62, 63, 64, 69, 73, 77, 88, 90, 92
shoreline access 6, 11, 12, 46, 53, 57, 59, 62, 64, 79, 81, 100
Shoreline Management Initiative ..... iii, 3, 11, 38, 53, 96
Shoreline Management Policy ..... i, iii, 3, 57, 64
socioeconomics ..... i, 47
species ..... i, ii, 5, 16, 17, 18, 19, 20, 21, 23, 24, 28, 30, 31, 32, 33, 35, 37, 54, 55, 59, 61, 63, 71, 73, 78, 90, 95, 96, 99, 100
State Historic Preservation Officer 41
tailwater 44
Tennessee .. 1, i, ii, iii, 1, 2, 5, 9, 10, 11, 13, 14, 19, 20, 24, 25, 27, 30, 31, 33, 34, 35, 36, 39, 41, 42, 43, 44, 45, 47, 48, 49, 50, 51, 52, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 95, 96, 97, 100
Tennessee Valley Authority 1, i, ii, iii, 1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, 17, 18, 19, 20, 21, 22, 23, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 42, 43, 44, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 67, 68, 69, 70, 71, 72,73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 96, 97, 99, 100, 107
terrestrial ecology ..... i, 15, 18
threatened ..... i, 5, 23, 27, 28, 54, 59, 74, 100
threatened species 23, 28, 100
TVA Land Policy 64
U.S. Environmental Protection Agency 15, 97
U.S. Fish and Wildlife Service 16, 17, 18, 54, 97
U.S. Forest Service 17
uncommitted land 58
visual resource ..... i, 6, 44
wetland ..... i, ii, 15, 18, 31, 32, 37, 38, 44, 54, 59, 61, 71, 72, 79, 81, 82, 86, 87, 89, 97, 99, 100
wildlife .... ii, iii, 5, 14, 17, 18, 20, 24, 30, 31, 32, 33, 36, 37, 38, 44, 54, 55, 58, 61, 70, 71, 72, 73, 76, 78, 86, 89, 90, 91, 93, 97, 100

Appendix A – Draft Land Management Plan Maps – Panels 1 through 4

This page intentionally left blank

Nickajack Reservoir



Click Panel to View PDF Map

This page intentionally left blank

Appendix B – Comparison of Parcel Allocations by Alternative

This page intentionally left blank

APPENDIX B

Comparison of Parcel Allocations by Alternative

NICKAJACK RESERVOIR

Of the 3,604.8 acres on Nickajack Reservoir, there are no proposed allocation changes to 2,488.7 acres (69 percent); all proposed allocation changes involve 1,116.1 acres (31 percent). Of the 1,116.1 acres, TVA would allocate 664.8 acres (59.6 percent) to reflect existing land use agreements or commitments. The remaining 451.3 acres (40.4 percent) involve proposed parcel allocations that are not based on existing land use agreements or commitments. See Appendix B for parcel allocation description tables.

[1]Some parcels are separated into smaller portions to show comprehensive consideration of some parcels. Portions of parcels are in bold text with a footnote.

See Tables below:

Table 1 = No Proposed Allocation Changes;
Table 2 = Changes Based on Existing Agreements or Commitments;
Table 3 = Changes NOT based on Existing Agreements or Commitments

Table 1. No Proposed Allocation Changes			
Number of Parcels Per Zone Allocation			
Zone 2	6	Zone 5	4
Zone 3	6	Zone 6	9
Zone 4	8	Zone 7	0
Parcel	**No Action Allocation (Alterative A)**	**Proposed Allocation (Alternative B)**	**Acres per Allocation**
1[1]	2	2	404.4
4[1]	3	3	329.0
5[1]	2	2	131.5
6[1]	4	4	66.5
7[1]	4	4	382.1
8	6	6	43.0
9	3	3	85.2
10	5	5	48.2
11	2	2	25.3
12	6	6	3.5
13	6	6	8.2
14	6	6	2.2
15	5	5	1.2
16[1]	3	3	18.8
18[1]	4	4	73.9
19	6	6	4.2
20	6	6	0.2
22	4	4	30.7
23	4	4	37.6
24[1]	6	6	11.8
25[1]	2	2	22.6
26	5	5	19.9
27	4	4	22.3
28	2	2	0.7
29[1]	6	6	1.0
30[1]	4	4	44.1
33	3	3	110.3
34	4	4	123.2
35[1]	2	2	9.0
36	3	3	411.7
37	6	6	12.4
38	5	5	1.0
39	3	3	3.1
Total = 33 Parcels or Portions of a Parcel		**Total = 2,488.7 Acres**	

[1]Denotes a portion of the parcel

Table 2. Changes Based on Existing Agreements or Commitments			
	No Action[1] Parcels	Proposed Allocation Parcels	
Zone 2	1	11	*18.4 Percent of Nickajack Lands*
Zone 3	4	0	
Zone 4	9	0	
Zone 5	2	2	20 Parcels 664.8 Acres
Zone 6	3	5	
Zone 7	0	2	
Parcel	**No Action Allocation (Alternative A)**	**Proposed Allocation (Alternative B)**	**Acres per Allocation**
1[1]	3	2	49.9
1[1]	4	2	441.3
2	4	6	3.3
2a	4	6	5.6
3	4	6	46.0
5[1]	3	2	5.7
5[1]	4	2	37.7
17[1]	3	2	1.7
17[1]	4	2	10.3
17[1]	6	2	0.7
18a	4	7	0.4
21	6	7	0.3
24[1]	2	6	2.1
24[1]	5	6	5.9
25[1]	5	2	3.0
32[1]	Unplanned	5	4.1
32[1]	4	5	11.1
35[1]	3	2	7.1
35[1]	4	2	26.8
35[1]	6	2	1.8
Total = 20 Parcels or Portions of a Parcel		**Total = 664.8 Acres**	

[1]Denotes a portion of the parcel

Table 3. Changes NOT Based on Existing Agreements or Commitments			
	No Action Parcels	Proposed Allocation Parcels	
Zone 2	1	0	*12.5 Percent of Nickajack Lands*
Zone 3	1	3	
Zone 4	5	3	
Zone 5	0	0	8 Parcels 451.3 Acres
Zone 6	1	2	
Zone 7	0	0	
Parcel	**No Action Allocation (Alternative A)**	**Proposed Allocation (Alternative B)**	**Acres per Allocation**
4[1]	4	3	6.3
7[1]	2	4	24.2
9	4	3	372.8
16[1]	4	3	19.5
18[1]	6	4	0.1
29[1]	4	6	2.6
30[1]	3	4	2.8
31	4	6	23.0
Total – 8 Parcels or Portions of a Parcel		**Total = 451.3 Acres**	

[1]Denotes a portion of the parcel

TENNESSEE VALLEY AUTHORITY

Multiple Reservoir Land Management Plans

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Volume VII
Normandy Reservoir

December 2016

TVA

This page left blank intentionally

Document Type: EIS Administrative Record
Index Field: Draft EIS
Project Name: Multiple RLMPs & CVLP EIS
Project Number: 2016-2

NORMANDY RESERVOIR

Draft Reservoir Land Management Plan

VOLUME VII

MULTIPLE RESERVOIR LAND MANAGEMENT PLANS
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Prepared by
Tennessee Valley Authority

December 2016

This page intentionally left blank

Table of Contents

ACRONYMS AND ABBREVIATIONS ..... VII-V
CHAPTER 1. INTRODUCTION..... VII-1
1.1 Tennessee Valley Authority History VII-1
1.2 Overview of TVA's Mission and Environmental Policy VII-2
1.2.1 TVA's Mission VII-2
1.2.2 Environmental Policy VII-2
1.2.3 Land Policy VII-2
1.2.4 Shoreline Management Policy VII-3
1.3 The Natural Resource Plan VII-5
1.4 Purpose of Reservoir Land Planning VII-5
CHAPTER 2. REGIONAL OVERVIEW..... VII-7
2.1 History of Normandy Dam ..... VII 7
2.2 Normandy Reservoir and Present Shoreline ..... VII 8
2.2.1 Land Use and Prime Farmland ..... VII 8
2.2.2 Recreation ..... VII 10
2.2.3 Terrestrial Ecology ..... VII 12
2.2.4 Aquatic Ecology ..... VII 17
2.2.5 Threatened and Endangered Species ..... VII 20
2.2.6 Water Quality ..... VII 30
2.2.7 Wetlands ..... VII 31
2.2.8 Floodplains ..... VII 33
2.2.9 Air Quality ..... VII 33
2.2.10 Cultural and Historic Resources ..... VII 34
2.2.11 Natural Areas and Ecologically Significant Sites ..... VII 36
2.2.12 Aesthetics and Visual Resources ..... VII 37
2.2.13 Noise ..... VII 37
2.2.14 Socioeconomics and Environmental Justice ..... VII 38
2.3 Major Features of Normandy Reservoir ..... VII 40
2.3.1 Natural Resource Management ..... VII 40
2.3.2 Normandy Fish Hatchery ..... VII 41
2.3.3 Short Springs Natural Area ..... VII 41
2.4 The Future Management of Reservoir Lands ..... VII 41
CHAPTER 3. LAND PLANNING PROCESS..... VII 43
3.1 Process for Planning Land ..... VII 43
3.2 Normandy Reservoir Goals and Objectives ..... VII 48

3.3 Parcel Allocations ..... VII 49
3.4 Property Administration ..... VII 53
CHAPTER 4. PARCEL DESCRIPTIONS ..... VII 55
CHAPTER 5. PLANNING TEAM ..... VII 77
CHAPTER 6. LITERATURE CITED ..... VII 79
GLOSSARY ..... VII 83
INDEX ..... VII 85

Appendices

Appendix A – Draft Land Management Plan Maps – Panels 1 and 2 ..... VII 87
Appendix B – Comparison of Parcel Allocations by Alternative ..... VII 91

List of Tables

Table 2-1. Prime Farmland in Normandy Reservoir ..... VII 9
Table 2-2. Developed Public Recreation Areas on TVA Lands on the Normandy Reservoir ..... VII 11
Table 2-3 Developed Commercial, Private and Semi-Private (camps) Recreation Areas on TVA Lands on the Normandy Reservoir ..... VII 11
Table 2-4. Land Cover on TVA Owned Parcels and within the Vicinity of Normandy Reservoir ..... VII 12
Table 2-5. Invasive Non-native Plant Species that Pose a Severe Threat Known to Occur in Tennessee ..... VII 15
Table 2-6. RFAI and Benthic Community Scores for Normandy Reservoir (2008-2013) ..... VII 18
Table 2-7. Fish Species in Normandy Reservoir ..... VII 19
Table 2-8. Federally and State-Listed Species in the Normandy Reservoir Counties ..... VII 21
Table 2-9. Habitat Requirements for Plant Species of Conservation Concern within 5 Miles of Normandy Reservoir ..... VII 25
Table 2-10. Habitat Requirements for Terrestrial Wildlife Species of Conservation Concern within 3 Miles of Normandy Reservoir ..... VII 27
Table 2-11. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Normandy Reservoir ..... VII 29
Table 2-12. Wetland Types within the Normandy Reservoir ..... VII 32
Table 2-13. Population and Percent Growth – Normandy Reservoir ..... VII 39
Table 2-14. Employment and Income, 2010-2014 – Normandy Reservoir ..... VII 39
Table 2-15. Minority Population and Poverty, 2010-2014 – Normandy Reservoir ..... VII 40
Table 3-1. Land Use Zone Definitions ..... VII 43
Table 3-2. Summary of Proposed Land Use Allocations for the Draft Normandy Reservoir Land Management Plan (Alternative B) ..... VII 49
Table 3-3. Draft Normandy Reservoir Land Management Plan (Alternative B) and 2011 IComprehensive Valleywide Land Plan Comparison ..... VII 52

List of Figures

Figure 1-1. TVA Managed Reservoir Land ..... VII 4
Figure 3-1. Percent of Normandy Reservoir Acreage Allocated by Zone ..... VII 50

This page intentionally left blank

ACRONYMS AND ABBREVIATIONS

§	Section
APE	Area of Potential Effect
CFR	Code of Federal Regulations
CVLP	Comprehensive Valleywide Land Plan
dBA	A-Weighted Decibel
DSNA	Designated State Natural Area
EIS	Environmental Impact Statement
EO	Executive Order
HPA	Habitat Protection Area
msl	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NRI	Nationwide Rivers Inventory
NRP	Natural Resource Plan
RFAI	Reservoir Fish Assemblage Index
RLMP	Reservoir Land Management Plan
ROW	Right-of-Way
RVSMP	Reservoir Vital Signs Monitoring Program
SHPO	State Historic Preservation Officer
SMI	Shoreline Management Initiative
SMP	Shoreline Management Policy
TWRA	Tennessee Wildlife Resources Agency
TVA	Tennessee Valley Authority
USDA	U.S. Department of Agriculture
USDOI	U.S. Department of the Interior
USGS	U.S. Geological Survey
WMA	Wildlife Management Area

This page intentionally left blank

CHAPTER 1. INTRODUCTION

The draft Normandy Reservoir Land Management Plan (RLMP) is a study of the Tennessee Valley Authority (TVA)-managed public land surrounding Normandy Reservoir. It is one of eight proposed RLMPs considered under Alternative B of this Environmental Impact Statement (EIS). The EIS Volume I, contains information on the scoping process, allocation process, alternatives, comparison of the alternatives, and analysis of impacts. In addition, the EIS contains a summary, an index and appendices.

Volume VII of the EIS addresses TVA's proposed RLMP for Normandy Reservoir. This document provides background information about TVA land management throughout its history and specifically TVA management of public land surrounding Normandy Reservoir. It explains the purpose of the draft RLMP and describes the process used in its development. The draft RLMP includes the planning process, which lists the objectives around which the RLMP was developed and a summary of the allocation process. The Normandy Reservoir Regional Overview (Chapter 2) describes the natural and social development of the reservoir and the surrounding area. The Parcel Descriptions (Chapter 4) include total acreage and parcel descriptions documenting proposed land management allocations. The allocation map is included as Appendix A of this draft RLMP.

Once TVA completes its Multiple RLMP EIS, this Volume will serve as the consolidated planning document addressing management of TVA reservoir lands on Normandy Reservoir and will be available to TVA staff and the public.

1.1 Tennessee Valley Authority History

President Franklin Roosevelt needed creative solutions to lift the nation out of the depths of the Great Depression, and TVA is considered one of his most innovative initiatives. Roosevelt envisioned TVA as an agency different from any other. He asked Congress to create "a corporation clothed with the power of government but possessed of the flexibility and initiative of a private enterprise." On May 18, 1933, Congress passed the Tennessee Valley Authority Act (TVA Act). A link to the TVA Act is available at https://www.tva.com/About-TVA/Our-History.

From the start, TVA established a unique problem-solving approach to fulfilling its mission: Integrated Resource Management. Each issue TVA faced—whether it was power production, navigation, flood control, malaria prevention, reforestation, or erosion control—was studied in its broadest context. TVA weighed each issue relative to the others. From this beginning, TVA has

held fast to its strategy of integrated solutions, even as the issues changed over the years. A short TVA history is available at http://www.tva.com/abouttva/history.htm.

1.2 Overview of TVA's Mission and Environmental Policy

1.2.1 TVA's Mission

TVA has a rich history of improving quality of life and economic prosperity for people and businesses in the TVA service area. TVA was created by Congress in 1933 and charged with a unique mission—to improve the quality of life in the Valley through the integrated management of the region's resources. For more than eight decades, we have worked tirelessly to carry out that mission, and we are working just as hard to make life better for the nine million people who live in the Valley today. We serve the people of the Tennessee Valley by focusing on three key areas: energy, environment, and economic development.

1.2.2 Environmental Policy

As stated in TVA's 2007 Strategic Plan, "TVA will be proactive in addressing environmental concerns, including those related to global climate change." About half of the identified strategic objectives and critical success factors in the plan relate directly to TVA's environmental activities and policy-making.

Following the release of the 2007 Strategic Plan, the TVA Board asked for the development of an integrated environmental policy to outline objectives and critical success factors across the multiple areas of TVA's activities. In 2008, the TVA Board approved the Environmental Policy, which provides guiding principles for reducing the environmental impacts of TVA operations while continuing to provide reliable and affordable power to the Valley. In 2010, a biennial review of the Environmental Policy was completed, which did not result in major changes or revisions. TVA's overarching Environmental Policy objective is to provide cleaner, reliable, and affordable energy; support sustainable economic growth in the Valley; and engage in proactive environmental stewardship in a balanced and ecologically sound manner. A copy of the Environmental Policy is available at http://www.tva.com/environment/policy.htm.

1.2.3 Land Policy

On behalf of the United States (U.S.), TVA originally acquired approximately 1.3 million acres of land in the Valley. Creation of the TVA reservoir system inundated approximately 470,000 acres with water. TVA has transferred or sold approximately 508,000 acres, the majority of which was transferred to other federal and state agencies for public uses. TVA currently controls approximately 293,000 acres of reservoir lands, which continue to be managed pursuant to the

TVA Act (Figure 1-1). As part of its management of these lands, TVA allocates them to various land use zones (see Section 3.1). These TVA-managed lands are frequently referred to as “TVA lands” in this document.

In 2006, TVA adopted a Land Policy to guide retention, disposal, and planning of real property. Accordingly, it is TVA’s policy to manage its lands to protect the integrated operation of the TVA reservoir and power systems, to provide for appropriate public use and enjoyment of the reservoir system, and to provide for continuing economic growth in the Valley. Recognizing that historical land transfers have contributed substantially to meeting multipurpose objectives, TVA maintains the policy of retaining in public ownership the reservoir lands under its control except in those rare instances where the benefits to the public will be so significant that transferring lands to private ownership or another public entity is justified. The Land Policy is available at https://www.tva.gov/Environment/Environmental-Stewardship/Land-Management/TVA-Land-Policy

1.2.4 Shoreline Management Policy

In November 1998, TVA completed a Shoreline Management Initiative (SMI) EIS (TVA 1999) analyzing possible alternatives for managing residential shoreline development throughout the Valley. In April 1999, TVA adopted the agency’s current Shoreline Management Policy (SMP), which incorporates a strategy of managing public shoreline through an integrated approach that conserves, protects, and enhances shoreline resources and public use opportunities while providing for reasonable and compatible use of the shoreline by adjacent residents. The SMP defines the standards for vegetation management, docks, shoreline stabilization, and other residential shoreline alterations. The SMI EIS is available at https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy.

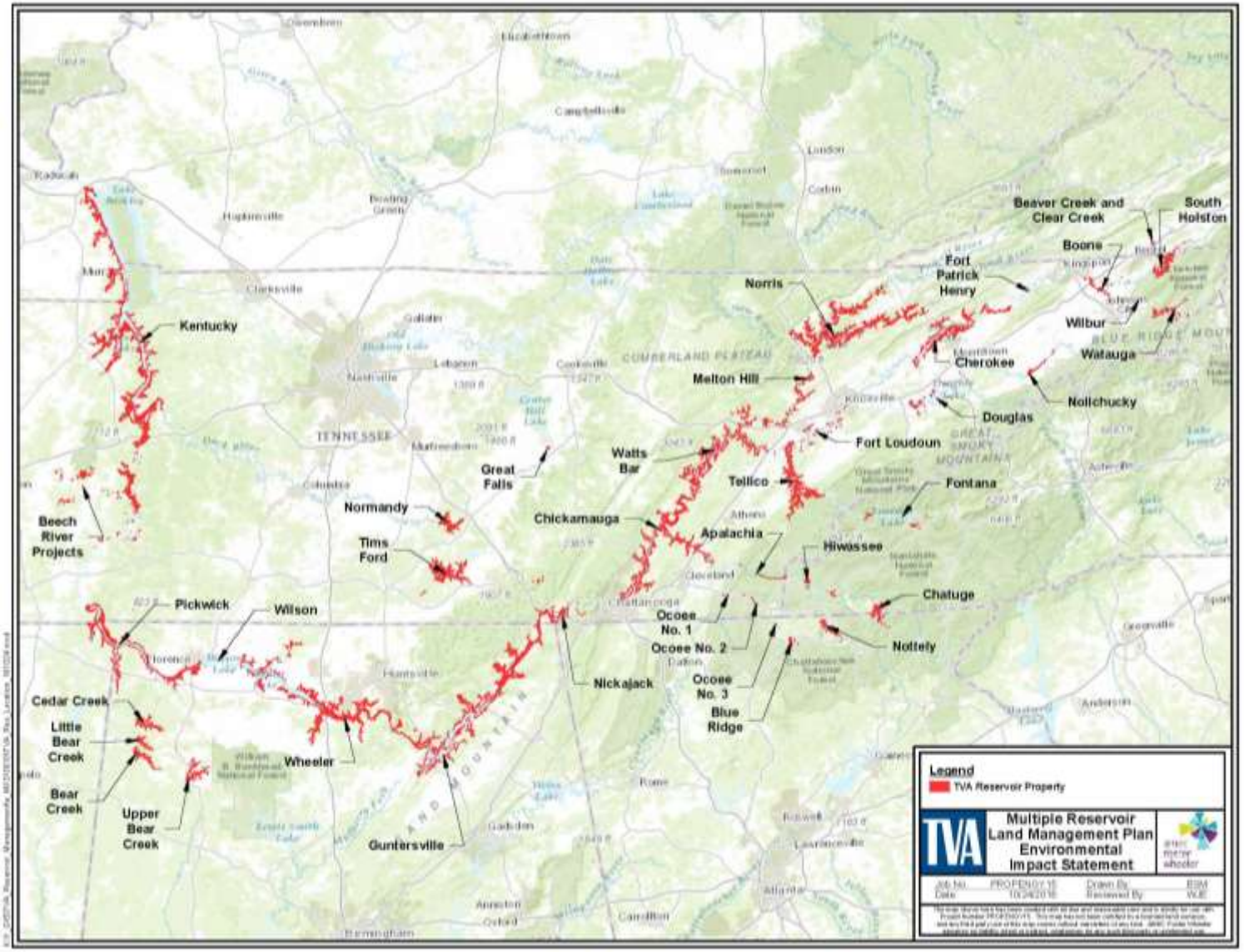


Figure 1-1. TVA Managed Reservoir Land

1.3 The Natural Resource Plan

In 2011, TVA completed a Natural Resource Plan (NRP) (TVA 2011) that strategically guides the management of both renewable and nonrenewable resources, underscoring the importance of protecting those resources that will be lost forever if they are not actively protected or improved today. TVA is one piece of the solution and recognizes the need for a coordinated and collaborative effort to meet the near- and long-term resource needs. As such, the NRP is designed to:

- Integrate the objectives of six resource areas (biological, cultural, recreation, water, public engagement and reservoir lands planning)
- Provide optimum public use benefit
- Balance competing and sometimes conflicting resource uses

These competing interests, coupled with today's environmental awareness and focus on preserving nonrenewable resources, underscore the necessity for a consistent approach to the management of TVA lands. The NRP represents TVA's high-level strategy for managing its natural resources in the near and long term. Detailed implementation plans, such as this draft RLMP, are being developed based on the NRP to drive specific implementation efforts. The NRP is available at https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan.

1.4 Purpose of Reservoir Land Planning

As a regional development agency and the nation's largest public power provider, TVA is committed to protecting and sustaining the environmental resources of the Valley for future generations through leadership in clean energy innovation and environmental management. In managing its public lands and resources, TVA seeks to provide efficient resource stewardship that is responsive to stakeholder interests.

TVA intends to manage its public land for an optimum level of multiple uses and benefits that protect and enhance natural, cultural, recreational, and visual resources in a cost-effective manner. Through this approach, TVA ensures that resource stewardship issues and stakeholder interests are considered while optimizing benefits and minimizing conflicts.

As part of the NRP, TVA developed a Comprehensive Valleywide Land Plan (CVLP) (TVA 2011). The CVLP guides resource management and administration decisions on the approximately 293,000 acres of TVA lands around 46 reservoirs. It identifies the most suitable

uses for the land under TVA's control, identifying areas for project operations, sensitive resource management, natural resource conservation, industrial/commercial development, developed recreation, and shoreline access. The objectives of the CVLP are designed to implement TVA's mission of serving the Valley through energy, environment, and economic development. Under the CVLP methodology, TVA will develop and update RLMPs, such as this draft plan, for a portion of a reservoir, an entire reservoir, or a group of reservoirs. RLMPs are consistent with TVA's policies and programs discussed within this chapter.

The CVLP will be recalibrated as needed (as described under Alternative B in Volume I of this EIS, TVA proposes to update the target ranges of the CVLP to incorporate the findings of the eight proposed RLMPs). The CVLP was based, in part, on the anticipation that some parcels of land may be better allocated to different land use zones from those initially identified. For example, field assessments may identify additional areas that warrant the sensitive resource management allocation. In addition, during the creation or update of each individual RLMP, TVA may determine, either for its own management purposes or as a result of public input, that certain parcels of land should be used differently from how they have been used in the past. The preliminary results of the Normandy Reservoir planning effort have been included in determining the potential revisions to the CVLP.

The draft Normandy RLMP and proposed revisions to the CVLP Allocation Ranges will be included in the five-year cyclic review of the NRP.

CHAPTER 2. REGIONAL OVERVIEW

The headwaters of the Tennessee River are in eastern Tennessee, in southwestern Virginia, western North Carolina, and in northern Georgia. The Tennessee River is formed by the confluence of the Holston and French Broad rivers just above Knoxville, Tennessee. The river flows in a southwesterly direction through Tennessee, crosses northern Alabama, forms a small portion of the northeastern boundary of Mississippi, and then flows north through western Tennessee and western Kentucky to empty into the Ohio River at Paducah, Kentucky, a distance of about 650 miles. The Tennessee River drains an area of 40,910 square miles–about equal to the area of Ohio. The headwaters are in the Smoky Mountains and the Blue Ridge Mountains, which are the highest ranges east of the Rockies. The mountain region is in striking contrast to the relatively flat lands of northern Alabama and to the rolling land of western Kentucky.

The TVA Act was amended August 31, 1935, requiring TVA to report to Congress their recommendations for the unified development of the Tennessee River System. The proposed system would include nine main river, multi-purpose dams, and three or more tributary storage dams. The system would contribute substantial to the control of floods on the Tennessee, lower Ohio, and lower Mississippi Rivers, establish a formalized navigation channel, and provide many related benefits, including a large supply of electric power. By the end of 1970, the integrated water control system in the Valley was comprised of 32 major dams, nine on the Tennessee River and 23 on its tributaries.

2.1 History of Normandy Dam

Normandy Dam is a part of the Duck River Project that was created to aid the economic advancement of the upper Duck River region. Normandy is TVA's largest non-power tributary storage project. It is located at Duck River mile 248.6 in Bedford and Coffee counties in middle Tennessee. It is operated for flood damage reduction, water supply, recreation and economic development. Normandy also provides water for a fish hatchery immediately downstream of Normandy Dam.

Construction of Normandy Dam began on June 7, 1972 and was completed on January 5, 1976. Normandy Dam consists of a rolled earth-filled embankment that is 110-feet-high and stretches 2,800 feet across the Duck River. The earth filled embankment required 180,000 cubic yards of dirt and 170,000 cubic yards of rock to be removed from the construction site. It also required approximately 1,800,000 cubic yards of earth fill and 30,000 cubic yards of concrete. Normandy

Dam has two spillways that are 40-feet-high by 36-feet-wide with radial gates that are operated on site by two hoists.

Before the construction of Normandy Dam, 90 families and one cemetery were relocated. The highway system of Bedford and Coffee counties received approximately 14 miles of road relocations and also included the construction of two major bridges. The relocation of public utilities included power transmission lines, distribution lines, and telephone lines.

2.2 Normandy Reservoir and Present Shoreline

Normandy Dam is located at Duck River mile 248.6, approximately 8 miles north of Tullahoma, Tennessee, and 1.5 miles upstream from Normandy, Tennessee. Normandy Dam stretches over 1,800 feet across the Duck River in Bedford and Coffee counties in Tennessee.

Normandy Reservoir has a flood-storage capacity of 48,000 acre-feet between top-of-gates elevation 880-feet mean sea level (msl) and elevation 864-feet msl. The water level in Normandy Reservoir varies around 11 feet in a normal year. The minimum winter elevation for the reservoir is 664-feet msl, and the typical summer operating range is 875 feet msl.

2.2.1 Land Use and Prime Farmland

To create this reservoir, TVA originally acquired approximately 7,790 acres of land and land-rights for flooding, erosion control, and other purposes. The total amount of land inundated by the reservoir was approximately 2,993 acres. The remaining approximate 4,797 acres are the scope of this RLMP. These lands are currently managed in accordance with allocations made by TVA in the Normandy RLMP completed in 1990.

The shoreline of Normandy Reservoir is primarily composed of forested areas, with some residential development, parks, and recreational uses. These uses are generally reflected in the land cover database for the parcels around the reservoir and the surrounding area which identifies land cover in these areas as primarily forested and farmed areas with a relatively large amount of developed open space. Developed open space includes single family housing units on large lots, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes. There is also currently a term agricultural license below Normandy Dam for hay production.

According to TVA's 1998 SMI EIS, TVA owns all of the 75 miles of shoreline on Normandy Reservoir (see Volume I, Table 3-1). Approximately 15 percent of the TVA owned shoreline is available for residential shoreline access (see Volume I, Table 3-2). In the SMI EIS, TVA

estimates that approximately 41 percent of this TVA owned shoreline is currently developed with residential subdivisions. TVA has holds flowage easement rights along portions of this private shoreline.

As identified in above, TVA originally purchased approximately 7,791 acres of land in fee for Normandy Reservoir and approximately 2,993 acres are flood prone. Any structures placed within existing flowage easements or within the 500-year floodplain are subject to Section 26a of the TVA Act. Section 26a of the TVA Act requires that TVA's approval be obtained prior to the construction, operation, or maintenance of any dam, appurtenant works, or other obstruction affecting navigation, flood control, or public lands or reservations along or in the Tennessee River or any of its tributaries.

TVA public land on the Normandy Reservoir contains 640.4 acres of identified prime farmland (Table 2-1). Prime farmland has soil with the best combination of physical and chemical characteristics for producing food and fiber and is protected from conversion to industrial and nonagricultural uses by the United States Department of Agriculture (USDA). It is noted, however, that current soil mapping of prime farmland soils does not account for existing developed uses that may have previously disturbed and potentially converted prime farmland. No land of statewide importance designation occurs around the Normandy Reservoir.

Table 2-1. Prime Farmland in Normandy Reservoir

Proposed Zone (Draft RLMP)	Prime Farmland (acres)
Zone 2 – Project Operations	222.5
Zone 3 – Sensitive Resource Management	80.8
Zone 4 – Natural Resource Conservation	252.4
Zone 5 – Industrial	0.0
Zone 6 – Developed Recreation	82.7
Zone 7 – Shoreline Access	2.0
Total	**640.4**

Source: USDA Natural Resources Conservation Service (NRCS) 2016

The largest portion (252.4 acres) of prime farmland acreage occurs in areas that would be allocated to Zone 4 (Natural Resource Conservation), which would have little or no soil disturbance. Major soil disturbance could occur when TVA or other public facilities are constructed in lands designated for Zone 2 (Project Operations), which would include 222.5 acres of prime farmland. However, most parcels that would be designated for Zone 2 already contain facilities that are not likely to require substantial modification. Only 82.7 acres of

prime farmland occur in areas that would be allocated to Zone 6 (Developed Recreation), where major soil disturbances could occur in specific locations, if recreation facilities are constructed. Conversely, large areas would remain unaffected for more dispersed recreation management. The least amount of prime farmland (2 acres) occurs in parcels that would be allocated to Zone 7 (Shoreline Access).

For more information on land use and prime farmland resources and the potential impacts of the draft RLMP, see Volume I, Sections 3.2 and 3.3.

2.2.2 Recreation

TVA provides public lands for developed and dispersed recreational purposes through the reservoir lands planning process. Developed recreation uses include campgrounds, lodges, marinas, boat launching-ramps, parks, swimming pools, beaches and golf courses. Dispersed recreation activities include picnicking, primitive camping, hiking, bank fishing, hunting, kayaking and canoeing. In 2005, TVA developed a recreation strategic plan aimed at collaboratively enhancing recreational opportunities and addressing unmet recreational needs while managing the resources of the Tennessee River system (TVA 2005). This strategy laid out guiding principles for how to best design and develop recreation opportunities. During this reservoir lands planning effort, tracts of TVA-managed lands around Normandy Reservoir were categorized based upon a suitable use that is consistent with TVA policy and guidelines and applicable laws and regulations.

On Normandy Reservoir, developed recreation provides modern facilities and amenities such as campgrounds and developed boat launching-ramps, swimming beach and picnic facilities. These uses primarily occur on TVA lands that would be allocated to Zone 6 (Developed Recreation) and Zone 2 (Project Operations). On the Normandy Reservoir, approximately 5 percent (258.8 acres) of TVA land would be allocated to Zone 6 and approximately 17 percent (790.7 acres) would be allocated to Zone 2.

The Normandy Reservoir is an outdoor recreation resource that attracts visitors from within and outside the region. Five parcels contain recreation areas, which have been developed on the Normandy Reservoir. Many of these recreation areas are located on properties that TVA transferred, leased or licensed for recreation development and use. No public parks have been developed on lands made available by TVA.

Recreational facilities around Normandy Reservoir include two campgrounds operated commercially under 30-year recreation easements. The Barton Springs Campground and the

Cedar Point Campgrounds provide campsites, bathhouses, swimming areas, and pavilions. Cedar Point also includes a boat-launching ramp. Tennessee Wildlife Resource Agency (TWRA) manages additional lake access areas, each with paved parking lots and boat-launching ramps, at Boyd's Branch, Ward's Chapel and upstream of the Normandy Dam. On the downstream portion of the Normandy Dam Reservation, there is a public access area with paved parking, bank fishing facilities, and a canoe launch. This access area is on the upstream end of a 28-mile scenic floatway on the Duck River.

Table 2-2 itemizes developed recreation area lands that are managed by TVA or another public agency for recreation purposes. Table 2-3 summarizes commercial, private, and semi-private developed recreation areas. Table 2-2 and Table 2-3 do not itemize recreation areas on Non-TVA Shorelands (Zone 1) because these areas are beyond the scope of this draft RLMP. Normandy Reservoir parcel descriptions (see Chapter 4) further describe the management entity and management descriptions of recreation facilities on lands managed by either TVA or under contractual agreement.

Table 2-2. Developed Public Recreation Areas on TVA Lands on the Normandy Reservoir

Recreation Area	Managing Entity	Parcel Location
Normandy Dam Reservation	TVA	1
Boyd's Branch Boat Ramp	TWRA	4
Wards Chapel Boat Ramp	TWRA	13

Table 2-3 Developed Commercial, Private and Semi-Private (camps) Recreation Areas on TVA Lands on the Normandy Reservoir

Recreation Area	Managing Entity	Parcel Location
Cedar Point Campground	Recreation Resources Management	5
Barton Springs Campground and Boat Ramp	Recreation Resources Management	29

Some of the TVA lands around Normandy Reservoir provide excellent opportunities for dispersed or nature-based recreation activities. Dispersed recreation could occur on lands allocated to Zone 2 (Project Operations) and undeveloped areas allocated as Zone 6 (Developed Recreation) as well as on land allocated to Zone 3 (Sensitive Resource Management) (approximately 8 percent or 371.7 acres) or Zone 4 (Natural Resource Conservation) (70 percent or 3,362.8 acres). For example, on lands allocated to Zone 4 (Natural

Resource Conservation) appropriate dispersed recreation activities include hunting, bank fishing, and hiking.

For more information on recreation resources and the potential impacts of the draft RLMP, see Volume I, Section 3.4.

2.2.3 Terrestrial Ecology

Normandy Reservoir lies within the Interior Plateau ecoregion (USEPA 2013). The Interior Plateau ecoregion is a series of grassland plateaus and forested uplands that are generally lower in elevation than the Appalachian Mountains to the east but higher than the plains to the south. The variety of landforms, soils, climate, and geology across the Interior Plateau have allowed for an extremely diverse assemblage of animals, including migratory birds of conservation concern. Deciduous forests and mixed evergreen-deciduous forests provide wildlife habitat among the agriculture and more urbanized areas (U.S. Geological Survey [USGS] 2016). Table 2-4 contains a summary of the land cover within and in the vicinity of Normandy Reservoir.

Table 2-4. Land Cover on TVA Owned Parcels and within the Vicinity of Normandy Reservoir

	TVA Property		Vicinity (5-Mile Radius)	
Land Cover Type	**Acres[1]**	**Percent Cover (%)**	**Acres[1]**	**Percent Cover (%)**
Barren Land	53.0	1.1	260.9	0.2
Developed		0.0		0.0
Developed, High Intensity	1.5	0.0	574.2	0.4
Developed, Medium Intensity	20.8	0.4	1,719.7	1.3
Developed, Low Intensity	19.0	0.4	5,798.8	4.4
Developed, Open Space	148.0	3.1	12,426.0	9.4
Forest		0.0		0.0
Deciduous Forest	3,472.4	72.4	53,461.4	40.6
Evergreen Forest	182.9	3.8	2,817.2	2.1
Mixed Forest	160.2	3.3	1,731.5	1.3
Shrubland		0.0		0.0
Shrub/Scrub	62.1	1.3	2,821.6	2.1
Herbaceous		0.0		0.0
Grassland/Herbaceous	68.9	1.4	1,628.1	1.2
Hay/Pasture	382.2	8.0	35,646.8	27.1
Planted/Cultivated		0.0		0.0
Cultivated Crops	34.4	0.7	6,550.0	5.0

Wetlands/Open Water		0.0		0.0
Woody Wetlands	59.9	1.2	3,196.2	2.4
Emergent Herbaceous Wetlands	4.7	0.1	56.3	0.0
Open Water	127.3	2.7	2,936.5	2.2
Total	**4,797.3**	**100**	**131,625.0**	**100**

[1] Source: Homer et al. 2015

Oak-hickory deciduous forest is the most abundant forest type in the eastern U.S. and is prevalent in the Normandy Reservoir region. Some mixed deciduous-evergreen and evergreen forests are also present in this region. Numerous bird species nest in deciduous forests. Typical species include wild turkey, whip-poor-will, ruby-throated hummingbird, red-eyed vireo, wood thrush, black-throated green warbler, black-and-white warbler, ovenbird, hooded warbler, and the scarlet tanager. Several additional migratory bird species of concern utilize these habitats in this area including black-billed cuckoo, Kentucky warbler, red-headed woodpecker, wood thrush and worm-eating warbler (USFWS 2016b). Common mammal species of deciduous forests include white-tailed deer, red bat, eastern chipmunk, eastern gray and southern flying squirrels, white-footed mouse, short-tailed shrew, gray fox, and bobcat.

Deciduous forests and mixed evergreen-deciduous forests account for 78 percent of the land cover within the Normandy Reservoir parcels (see Table 2-4). Evergreen forests make up an additional four percent of the land cover. Seeps, streams, and temporary ponds in deciduous forests provide habitat for numerous amphibians including American and Fowler's toads, green frog, northern cricket frog, and other frogs, and a range of salamanders including spotted and mole salamanders. Reptiles commonly found in deciduous forests especially near water include eastern fence lizard, ground skink, five-lined skink, eastern box turtle, eastern worm snake, black racer, and ring-necked snake. The riparian zones along streams within deciduous forests provide nesting habitat for Acadian flycatchers, northern parula, and migratory species of concern in this area, including the Louisiana waterthrush and Prothonotary warbler (USFWS 2016a).

Evergreen and mixed evergreen-deciduous forests provide nesting for woodland birds including pine and yellow-throated warblers, and great crested flycatcher. Several additional migratory bird species of concern utilize these habitats in this area including black-billed cuckoo, Kentucky warbler, fox sparrow, and prairie warbler (USFWS 2016a). Portions of this forest type have been damaged by southern pine beetles in recent years. Several stands of dead pines exist on TVA lands, and TVA has performed salvage harvests in some stands. Dead pines provide foraging

sites for woodpeckers and roosting sites for little brown and silver-haired bats. Other animals that inhabit evergreen and evergreen-deciduous forests but are not restricted to them include white-tailed deer, wild turkey, eastern mole, eastern kingsnake, smooth earth snake, eastern fence lizard, six-lined racerunner, and a variety of salamanders, frogs, and toads, especially near wet areas.

Non-forested herbaceous community types in the Normandy Reservoir region are dominated by pasturelands and hayfields. Herbaceous habitats, including grasslands, barrens, hayfields, and pastures account for approximately nine percent of the land cover on the reservoir parcels (Table 2-4). Early successional habitats provide habitat for a variety of bird species including eastern bluebird, eastern meadowlark, American crow, and red-tailed hawk. Several additional migratory bird species of concern utilize these habitats in this area including dickcissel, sedge wren, short-eared owl, and willow flycatcher (USFWS 2016a). Amphibians and reptiles that use these habitats include spring peeper, and common garter snake.

Bird and mammal diversity greatly increases at edge habitats especially those between forested areas bordered by early successional habitats. Birds commonly found at these edge habitats include wild turkey, great crested flycatcher, white-eyed vireo, Carolina wren, blue-gray gnatcatcher, brown thrasher, common yellowthroat, yellow-breasted chat, indigo bunting, eastern towhee, field and song sparrow, and orchard oriole. Several additional migratory bird species of concern utilize these habitats in this area including blue-winged warbler, dickcissel, loggerhead shrike, red-headed woodpecker, and willow flycatcher (USFWS 2016a). Mammals typically inhabiting edges include eastern cottontail, eastern harvest mouse, red fox, coyote, long-tailed weasel, and striped skunk.

The reservoir parcels provide wetlands, including wooded swamps and open water habitats, and associated riparian zones that are used by a variety of wildlife. Common species include great blue heron, green heron, belted kingfisher, common yellowthroat, and northern parula. No colonial nesting bird colonies/heronries have been observed on TVA parcels at Normandy Reservoir (TVA 2016a). Many additional migratory bird species of concern utilize these habitats in this area including bald eagle, least bittern, Louisiana waterthrush, prothonotary warbler, rusty blackbird, sedge wren, short-eared owl, and willow flycatcher (USFWS 2016a). Shallow embayments, especially those with emergent vegetation, provide foraging habitat for waterfowl. Common waterfowl include wood ducks, Canada geese, and mallards. Other waterfowl present periodically present include American black duck, gadwall, green-winged teal, ring-necked duck, lesser scaup, common goldeneye, bufflehead, and hooded merganser.

Shorebird use of the Normandy Reservoir is limited to shallow embayments and exposed mud flats. Species such as spotted sandpiper that forage along the margins of reservoirs and killdeer that are not restricted to foraging on mud flats are commonly observed. Common amphibians found in the riparian zones include green frog, eastern narrowmouth toad, and Fowler's toad. Reptiles include northern water snake, common snapping turtle, and painted turtles. Common mammals include mink, muskrat, raccoon, and American beaver.

A search of the TVA Natural Heritage database in May 2016 indicated that 21 caves are located within 3 miles of Normandy Reservoir. Twelve caves are located on TVA parcels (TVA 2016a).

For information on terrestrial ecology and potential impacts of the draft RLMP, see Volume I, Section 3.5.

2.2.3.1 Invasive Nonnative Species

Many of the planned TVA parcels around Normandy Reservoir contain a substantial amount of invasive nonnative species. Executive Order (EO) 13112 defines an alien species as any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem; and whose introduction does or is likely to cause economic or environmental harm or harm to human health.

The Southeast Exotic Plant Pest Council provides a list of nonnative invasive species that could pose potential threats to native ecosystems and human health for each southeastern state (SE-EPPC 2016). In reviewing the Tennessee exotic plant pest list (Tennessee Exotic Plant Pest Council 2009), there were 26 species occurring in Tennessee that pose a severe threat to native ecosystems observed in the Great Falls Reservoir region (Table 2-5).

Table 2-5. Invasive Non-native Plant Species that Pose a Severe Threat Known to Occur in Tennessee

Common Name	Scientific Name
Asian bittersweet	*Celastrus orbiculatus*
Autumn olive	*Elaeagnus umbellata var. parviflora*
Cheat grass	*Bromus tectorum*
Chinese privet	*Ligustrum sinense*
Chinese yam	*Dioscorea oppositifolia*
Common privet	*Ligustrum vulgare*
Common St. John's-wort	*Hypericum perforatum*
Hydrilla	*Hydrilla verticillata*
Japanese honeysuckle	*Lonicera japonica*
Japanese knotweed	*Polygonum cuspidatum*

Common Name	Scientific Name
Japanese stiltgrass	*Microstegium vimineum*
Johnson grass	*Sorghum halepense*
Korean clover	*Kummerowia stipulacea*
Kudzu	*Pueraria montana var. lobata*
Mimosa	*Albizia julibrissin*
Multiflora rose	*Rosa multiflora*
Princess tree	*Paulownia tomentosa*
Purple loosestrife	*Lythrum salicaria*
Sericia lespedeza	*Lespedeza cuneata*
Shrubby bushclover	*Lespedeza bicolor*
Tree of heaven	*Ailanthus altissima*

Source: Tennessee Exotic Plant Pest Council 2009

All of these species have the potential to adversely impact the native plant communities because of their potential to spread rapidly and displace native vegetation. TVA considers all of the species a severe threat to local plant communities.

In addition to invasive or non-native plant species discussed above, there are several exotic, non-native, and/or pest insect species and plant diseases that are known to occur within the counties encompassing Normandy Reservoir. These insects and diseases can have devastating impacts on native plant communities and human crops/fruits. The insects include: Japanese beetle (*Popillia japonica)* and southern pine beetle (*Dendroctonus frontalis*) (EDDMapS 2016). These species all have the potential to pose problems to native vegetation, wildlife, crops, landscaping and gardens, and/or overall ecosystems due to the lack of natural predators or diseases to help control their populations giving them the ability to out-compete native species.

The following plant diseases are also known to occur in the counties containing Normandy Reservoir: butternut canker (*Sirococcus clavigignenti-juglandacearum*), dogwood anthracnose (*Discula destructive*), and Heterobasidion root rots (*Heterobasidion* spp.) Most of these diseases target certain plant species or groups of species, and can have serious impacts to local populations of those plants and trees.

There are several exotic, non-native, and/or pest terrestrial wildlife and other insect species that are known to occur within the region. These include: Asian tiger mosquito (*Aedes albopictus*), cat (feral) (*Felis catus*), and European starling (*Sturnus vulgaris*) (EDDMapS 2016). These species have the potential to pose problems to native wildlife and ecosystems due to their ability to out-compete native species and spread quickly. Some of these species can pose threats to

human health and safety. Asian tiger mosquitoes are known to transmit various diseases to humans.

2.2.4 Aquatic Ecology

Streams of the Highland Rim Ecoregion are characterized by coarse chert gravel and sand substrates interspersed with bedrock areas, moderate gradients, clear waters, and moderate to low productivity, and thus little aquatic vegetation except near spring sources (Etnier and Starnes 1993). The Highland Rim, because of its geologic complexity and numerous semi-independent drainage systems, harbors the most diverse fish fauna of any region of comparable size in North America.

The Duck River, a tributary to the Tennessee River within Kentucky Reservoir, is designated as a State Scenic River that is approximately 270 miles long. The Duck River watershed covers approximately 3,500 square miles (USACE 2012). Studies have documented aquatic faunal recovery in the Duck River from past disturbance in the watershed (Ahlstedt et al. 2004, Hubbs et al. 2010). This recovery is attributed to land protection and restoration efforts, improvements in Normandy Reservoir releases by TVA, the settling of channel morphology from earlier destabilizing events, removal of historic point and nonpoint sources of pollution from phosphate and iron ore mining, and the natural hardness of the water and abundance of groundwater inputs to the system (Palmer 2005).

The Duck River is globally important for biological diversity, especially for aquatic species, with approximately 151 species of fish, 69 species of mussels, and 22 species of aquatic snails. The Duck River is recognized as the most biologically diverse river system in Tennessee, supporting populations of many species that are found nowhere else (Palmer 2005). In particular, the Duck River is of tremendous importance to freshwater mollusks of the Cumberlandian mussel fauna and is a source and repository for state and federally listed species in need of conservation (Cumberlandian Region Mollusk Restoration Committee 2010). Historically, 75 mussel species occurred in the Duck River (Ahlstedt et al. 2004), but six mussel species of this extraordinary assemblage are presumed extinct (Hubbs et al. 2010).

Aquatic ecological conditions in streams and reservoirs are monitored under a number of TVA programs. Aquatic ecological conditions in the larger reservoirs have been monitored using the Reservoir Vital Signs Monitoring Program (RVSMP), which focuses on (1) physical and chemical characteristics of waters; (2) physical and chemical characteristics of sediments; (3) sampling the benthic macroinvertebrate community; and (4) fish assemblage sampling. The RVSMP data include annual fish sampling on tributary reservoirs on a two-year rotation

sampling cycle. Ratings are based primarily on fish community structure and function, using an analysis tool known as the Reservoir Fish Assemblage Index (RFAI) (McDonough and Hickman 1999).

Normandy Reservoir has consistently had poor ecological health ratings since 2000. Historically, the main issue has been low dissolved oxygen. In 1994, TVA installed aeration equipment in the reservoir to add oxygen to the deep water near the dam and to improve conditions in the Duck River downstream from the dam. A new, larger compressor and four new diffuser lines were added to the aeration system in 1997. Two of the new diffuser lines extended upstream of the sampling location and influenced the ecological health ratings. Three indicators (dissolved oxygen, chlorophyll and bottom life) exhibited marked changes.

The sampling site for bottom life was moved upstream to just upstream of the diffuser lines in 2008. TVA monitors one location on Normandy Reservoir — the deep, still water near the dam — for both RFAI and benthic community samples usually on a two-year cycle since 1996 (Table 2-6).

Table 2-6. RFAI and Benthic Community Scores for Normandy Reservoir (2008-2013)

Year	RFAI Scores	Benthic Community Scores
	Forebay	Forebay
2008	Good	--
2010	Good	--
2013	Good	Poor

Source: TVA 2016b

In the most recent sampling in 2013, the fish community rated good, as in all previous years. Bottom life (benthic community) has historically rated poor since the 1990s. The fish species collected during the RVSMP sampling efforts represent typical species found in large river and lentic habitats (Table 2-7). The poor rating for bottom life changed to a low-fair from 1998 to 2006, probably because of the improved dissolved oxygen conditions that resulted from the aeration system. The sample site was moved upstream of the diffuser lines in 2008, however episodes of low dissolved oxygen have impacted the density and composition of organisms found on the reservoir bottom each year. The majority of the organisms collected have been species capable of tolerating poor water quality conditions. Higher ratings in 1998-2006 were the result of improvements in the number of tolerant organisms collected rather than an improvement in the variety of organisms.

Table 2-7. Fish Species in Normandy Reservoir

Common Name	Scientific Name
Black crappie	*Pomoxis nigromaculatus*
Black redhorse	*Moxostoma duquesnei*
Blue catfish	*Ictalurus furcatus*
Bluegill	*Lepomis macrochirus*
Bullhead minnow	*Pimephales vigilax*
Channel catfish	*Ictalurus punctatus*
Common carp	*Cyprinus carpio*
Flathead catfish	*Pylodictis olivaris*
Gizzard shad	*Dorosoma cepedianum*
Golden redhorse	*Moxostoma erythrurum*
Golden shiner	*Notemigonus crysoleucas*
Green sunfish	*Lepomis cyanellus*
Hybrid white x yellow bass	*Hybrid morone (chrysops x miss)*
Largemouth bass	*Micropterus salmoides*
Largescale stoneroller	*Campostoma oligolepis*
Logperch	*Percina caprodes*
Longear sunfish	*Lepomis megalotis*
Longnose gar	*Lepisosteus osseus*
Mountain shiner	*Lythrurus lirus*
Redear sunfish	*Lepomis microlophus*
River redhorse	*Moxostoma carinatum*
Rock bass	*Ambloplites rupestris*
Silver redhorse	*Moxostoma anisurum*
Smallmouth bass	*Micropterus dolomieu*
Snubnose darter	*Etheostoma simoterum*
Spotfin shiner	*Cyprinella spiloptera*
Spotted bass	*Micropterus punctulatus*
Spotted sucker	*Minytrema melanops*
Threadfin shad	*Dorosoma petenense*
Walleye	*Stizostedion vitreum*
Warmouth	*Lepomis gulosus*
White bass	*Morone chrysops*
White crappie	*Pomoxis annularis*
Yellow perch	*Perca flavescens*

Source: TVA 2016c

2.2.4.1 Invasive Nonnative Aquatic Species

Although there are many exotic or introduced aquatic species within the region, there are a few species that are considered more detrimental due to their ability to have broad impacts to overall aquatic systems as well as direct impacts to humans. These include Asian carp,

especially bighead carp (*Hypophthalmichthys nobilis*) and silver carp (*Hypophthalmichthys molitrix*) (EDDMapS 2016), and zebra mussels (*Dreissena polymorpha*).

Asian carp cause serious damage to the native fish populations in the lakes and rivers that they infest because they out-compete other fish for food and space. Carp are also thought to lower water quality, which can kill off sensitive organisms like native freshwater mussels. Asian carp have been known to dominate entire streams, effectively pushing out the native species. Asian carp are also known to pose danger to humans due to their habit of jumping out of the water and striking boaters and water skiers and damaging boats and equipment.

Zebra mussels are notorious for their biofouling capabilities by colonizing water supply pipes of hydroelectric and nuclear power plants, public water supply plants, and industrial facilities. They colonize pipes constricting flow, therefore reducing the intake in heat exchangers, condensers, firefighting equipment, and air conditioning and cooling systems. Navigational and recreational boating can be affected by increased drag due to attached mussels. Small mussels can get into engine cooling systems causing overheating and damage. Navigational buoys have been sunk under the weight of attached zebra mussels. Zebra mussels can have profound effects on the ecosystems they invade. They primarily consume phytoplankton, but other suspended material is filtered from the water column including bacteria, protozoans, zebra mussel veligers, other microzooplankton and silt (Benson et al. 2016).

For information on aquatic ecology and potential impacts of the draft RLMP, see Volume I, Section 3.6.

2.2.5 Threatened and Endangered Species

TVA biologists and natural resource specialists used the TVA Natural Heritage database to assess the endangered and threatened species within and around Normandy Reservoir. The TVA Natural Heritage database was created to ensure that environmental compliance activities are conducted in a consistent manner across the TVA Region and that these activities meet the requirements of National Environmental Policy Act (NEPA) and the Endangered Species Act. Federally listed and state-listed species identified from the TVA Natural Heritage database searches that are known to occur in the counties surrounding Normandy Reservoir are listed in Table 2-8. For the purpose of this document state-listed species include those that are being tracked, in need of management, candidates, proposed for listing and of special concern. As noted below, one listed plant species is known to occur on TVA parcels on Normandy Reservoir. There are two terrestrial wildlife species known to occur on TVA parcels, however, suitable

habitat is present for many of the other listed species. Five listed aquatic species are known to occur within TVA parcels and six are known to occur in the reservoir adjacent to the parcels.

Table 2-8. Federally and State-Listed Species in the Normandy Reservoir Counties

Common Name	Scientific Name	Status[1]	
		Federal	State
Amphibians			
Barking treefrog	*Hyla gratiosa*	--	D (S3)
Four-toed salamander	*Hemidactylium scutatum*	--	D (S3)
Gopher frog	*Rana capito*	--	TRKD (S1)
Hellbender	*Cryptobranchus alleganiensis*	PS	D (S3)
Tennessee cave salamander	*Gyrinophilus palleucus*	--	T (S2)
Birds			
Bald eagle	*Haliaeetus leucocephalus*	DM	D (S3)
Henslow's sparrow	*Ammodramus henslowii*	--	D (S1B)
Fish			
Ashy darter	*Etheostoma cinereum*	--	T (S2S3)
Barrens darter	*Etheostoma forbesi*	--	E (S1)
Barrens topminnow	*Fundulus julisia*	--	E (S1)
Bedrock shiner	*Notropis rupestris*	--	D (S2)
Blotchside logperch	*Percina burtoni*	--	D (S2)
Coppercheek darter	*Etheostoma aquali*	--	T (S2S3)
Flame chub	*Hemitremia flammea*	--	D (S3)
Golden darter	*Etheostoma denoncourti*	--	D (S2)
Longhead darter	*Percina macrocephala*	--	T (S2)
Redband darter	*Etheostoma luteovinctum*	--	D (S4)
Saddled madtom	*Noturus fasciatus*	--	T (S2)
Slenderhead darter	*Percina phoxocephala*	--	D (S3)
Southern cavefish	*Typhlichthys subterraneus*	--	D (S3)
Striated darter	*Etheostoma striatulum*	--	T (S1)
Gastropod			
Helmet rocksnail	*Lithasia duttoniana*	--	TRKD (S2)
Ornate rocksnail	*Lithasia geniculata*	--	TRKD (S2)
Rockpile liptooth	*Daedalochila auriformis*	--	TRKD (S1)
Rugose rocksnail	*Lithasia jayana*	--	TRKD (SX)
Insect			
Duck River cave beetle	*Pseudanophthalmus tullahoma*	--	TRKD (S1)
Tennessee clubtail dragonfly	*Gomphus sandrius*	--	TRKD (S1)
Mammals			
Allegheny woodrat	*Neotoma magister*	--	D (S3)
Common shrew	*Sorex cinereus*	--	D (S4)
Gray bat	*Myotis grisescens*	LE	E (S2)
Indiana bat	*Myotis sodalis*	LE	E (S1)
Meadow jumping mouse	*Zapus hudsonius*	PS	D (S4)
Northern long-eared bat	*Myotis septentrionalis*	LT	E (S1S2)
Smoky shrew	*Sorex fumeus*	--	D (S4)
Southeastern shrew	*Sorex longirostris*	--	D (S4)
Mussels			

Common Name	Scientific Name	Status[1]	
		Federal	State
Birdwing pearlymussel	*Lemiox rimosus*	LE	E (S1)
Cumberland pigtoe	*Pleurobema gibberum*	LE	E (S1)
Fluted kidneyshell	*Ptychobranchus subtentum*	LE	TRKD (S2)
Pale lilliput	*Toxolasma cylindrellus*	LE	E (S1)
Round hickorynut	*Obovaria subrotunda*	--	TRKD (S2S3)
Slabside pearlymussel	*Pleuronaia dolabelloides*	LE	TRKD (S2)
Smooth rabbitsfoot	*Quadrula cylindrica*	LT	TRKD (S3)
Tan riffleshell	*Epioblasma florentina walkeri*	LE	E (S1)
Tennessee heelsplitter	*Lasmigona holstonia*	--	TRKD (S2)
Turgid Blossom pearlymussel	*Epioblasma turgidula*	LE	EXTI (SX)
Reptiles			
Northern pine snake	*Pituophis melanoleucus*	--	T (S3)
Plants			
A goldenrod	*Solidago stricta* var. *gracillima*	--	SPCO (S1)
A liverwort	*Pellia appalachiana*	--	SPCO (S2)
American ginseng	*Panax quinquefolius*	--	S-CE (S3S4)
American smoke-tree	*Cotinus obovatus*	--	SPCO (S2)
Appalachian bristle fern	*Trichomanes boschianum*	--	T (S1S2)
Barratt's sedge	*Carex barrattii*	--	E (S2)
Barrens silky aster	*Symphyotrichum pratense*	--	E (S1)
Beakrush	*Rhynchospora perplexa*	--	T (S2)
Beardgrass	*Gymnopogon brevifolius*	--	SPCO (S1S2)
Blackfoot quillwort	*Isoetes melanopoda*	--	E (S1S2)
Boykin's milkwort	*Polygala boykinii*	--	T (S2)
Broadleaf Barbara's-buttons	*Marshallia trinervia*	--	T (S2S3)
Broadleaf bunchflower	*Melanthium latifolium*	--	E (S1S2)
Butternut	*Juglans cinerea*	--	T (S3)
Button snakeroot	*Eryngium integrifolium*	--	T (S1)
Buxbaum's sedge	*Carex buxbaumii*	--	E (S1)
Canby's lobelia	*Lobelia canbyi*	--	T (S2S3)
Carolina anemone	*Anemone caroliniana*	--	E (S1S2)
Cluster fescue	*Festuca paradoxa*	--	SPCO (S1)
Coast pepper-bush	*Clethra alnifolia*	--	E (S1)
Coastal false-asphodel	*Triantha racemosa*	--	E (S1)
Creeping St. John's-wort	*Hypericum adpressum*	--	E (S1)
Death-camas	*Zigadenus leimanthoides*	--	T (S2)
Downy gentian	*Gentiana puberulenta*	--	E (S1)
Duck River bladderpod	*Paysonia densipila*	--	SPCO (S3)
Dwarf huckleberry	*Gaylussacia dumosa*	--	T (S3)
Dwarf sundew	*Drosera brevifolia*	--	T (S2)
Eaton's witchgrass	*Dichanthelium acuminatum* ssp. *spretum*	--	E (S1)
Eggert's sunflower	*Helianthus eggertii*	--	SPCO (S3)
Elliott's blueberry	*Vaccinium elliottii*	--	E (S1)
Falling beaked-rush	*Rhynchospora caduca*	--	SPCO (S1)
Fen indian-plantain	*Arnoglossum plantagineum*	--	T (S2)
Foxtail clubmoss	*Lycopodiella alopecuroides*	--	T (S2)
Fringed yellow-eyed-grass	*Xyris fimbriata*	--	E (S1)

Common Name	Scientific Name	Status[1]	
		Federal	State
Globe-fruited ludwigia	*Ludwigia sphaerocarpa*	--	T (S1)
Grassleaf arrowhead	*Sagittaria graminea*	--	T (S1)
Hairy fimbristylis	*Fimbristylis puberula*	--	T (S1S2)
Horned bladderwort	*Utricularia cornuta*	--	E (S1)
Large cranberry	*Vaccinium macrocarpon*	--	T (S2)
Large-leaved grass-of-parnassus	*Parnassia grandifolia*	--	SPCO (S3)
Leafy prairie-clover	*Dalea foliosa*	LE	E (S2S3)
Leather-flower	*Clematis glaucophylla*	--	E (S1)
Leggett's pinweed	*Lechea pulchella*	--	E (S1)
Leo's trifolium	*Trifolium calcaricum*	--	E (S1)
Limestone fame-flower	*Phemeranthus calcaricus*	--	SPCO (S3)
Liverwort	*Radula voluta*	--	SPCO (S2)
Liverwort	*Frullania obcordata*	--	SPCO (S1)
Loesel's twayblade	*Liparis loeselii*	--	T (S1)
Loose-head beakrush	*Rhynchospora chalarocephala*	--	T (S1)
Low frostweed	*Helianthemum propinquum*	--	E (S1S2)
Low nutrush	*Scleria verticillata*	--	SPCO (S2)
Maidencane	*Panicum hemitomon*	--	SPCO (S2)
Marsh bellflower	*Campanula aparinoides*	--	SPCO (S2)
Marsh pea	*Lathyrus palustris*	--	SPCO (S1)
Missouri evening-primrose	*Oenothera macrocarpa* ssp. *macrocarpa*	--	T (S2)
Narrow blue flag	*Iris prismatica*	--	T (S2S3)
Narrowleaf bushclover	*Lespedeza angustifolia*	--	T (S2)
Nestronia	*Nestronia umbellula*	--	E (S1)
Nuttall's milkwort	*Polygala nuttallii*	--	E (S1)
Ovate catchfly	*Silene ovata*	--	E (S2)
Pale green orchid	*Platanthera flava* var. *herbiola*	--	T (S2)
Pale-purple coneflower	*Echinacea pallida*	--	E (S1)
Panic-grass	*Dichanthelium acuminatum* ssp. *leucothrix*	--	SPCO (S1)
Prairie-dock	*Silphium pinnatifidum*	--	T (S2)
Red root	*Lachnanthes caroliana*	--	E (S1)
Ridge-stem false-foxglove	*Agalinis oligophylla*	--	E (S1)
Rose pogonia	*Pogonia ophioglossoides*	--	E (S2)
Rough rattlesnake-root	*Prenanthes aspera*	--	THR (S1)
Sand cherry	*Prunus pumila*	--	E (S1)
Sedge	*Carex hirtifolia*	--	SPCO (S1S2)
Sharp's lejeunea	*Lejeunea sharpii*	--	SPCO (S1S2)
Snowy orchid	*Platanthera nivea*	--	E (S1)
Southern twayblade	*Listera australis*	--	E (S1S2)
Spreading false-foxglove	*Aureolaria patula*	--	SPCO (S3)
Sunnybell	*Schoenolirion croceum*	--	T (S3)
Swamp loosestrife	*Lysimachia terrestris*	--	E (S1)
Swamp lousewort	*Pedicularis lanceolata*	--	SPCO (S1S2)
Tennessee milk-vetch	*Astragalus tennesseensis*	--	SPCO (S3)
Torrey muhly	*Muhlenbergia torreyana*	--	E (S1)

Common Name	Scientific Name	Status[1]	
		Federal	State
Virginia chainfern	*Woodwardia virginica*	--	SPCO (S2)
Virginia rose	*Rosa virginiana*	--	SPCO (SH)
Water-milfoil	*Myriophyllum pinnatum*	--	E (S1)
White-bract thoroughwort	*Eupatorium leucolepis*	--	E (S1)
Wolf spikerush	*Eleocharis wolfii*	--	E (S1)
Wooly sedge	*Carex pellita*	--	E (S1)
Yellow fringeless orchid	*Platanthera integra*	--	E (S1)
Yellow-eyed-grass	*Xyris laxifolia* var. *iridifolia*	--	T (S2)
Zigzag bladderwort	*Utricularia subulata*	--	T (S1)

[1]**Federal status abbreviations**: LE = Listed endangered, LT = Listed threatened; PS = Partial status; C = Candidate; DM = Recovered, delisted, and being monitored

State status abbreviations: E = Endangered; T = Threatened; D = In need of management; NOST = No status; SPCO= Special concern; TRKD = Tracked by state natural heritage program; S-CE = Special Concern - Commercially Exploited

State rank abbreviations: S1 = Critically imperiled, often with five or fewer occurrences, S2 = Imperiled, often with <20 occurrences; S3 = Rare or uncommon, often with <80 occurrences; S4 = Widespread, abundant, and apparently secure within the state, but with cause for long-term concern; SX = Believed to be extirpated from the state; SH = Of historical occurrence in Tennessee, e.g. formally part of the established biota, with the expectation that it may be rediscovered; S#S# = Denotes a range of ranks because the exact rarity of the element is uncertain (e.g., S1S2); S? = Unranked at this time or rank uncertain; _B = Breeds in Tennessee

Source TVA 2016a

In order to determine which of the species listed in each county are known to occur in the general vicinity of the reservoir, a more refined database search was conducted. Database searches are based on the following criteria: (1) distance, (2) element occurrence rank values, and (3) species or type of element present. Accordingly, plants are assessed within a 5-mile radius, aquatic species within a 10-mile radius, and terrestrial species within a 3-mile radius.

For information on threatened and endangered species and the potential impacts of the draft RLMP, see Volume I, Section 3.7.

2.2.5.1 Plants

Reviews of the TVA Natural Heritage database indicated that within the surrounding counties, there is one federally listed plant species, the endangered leafy prairie-clover. There are 86 state-listed species within the surrounding counties. Of these plants, 50 exist within 5 miles of the reservoir. Only American ginseng has been recorded on TVA parcels proposed to be allocated to Zone 4 (Natural Resource Conservation). These species and their habitat requirements are discussed in Table 2-9.

Table 2-9. Habitat Requirements for Plant Species of Conservation Concern within 5 Miles of Normandy Reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
A goldenrod (*Solidago stricta* var. *gracillima*)	Wet barrens and fields[2]	Limited habitat
American ginseng	Rich moist hardwood dominated woods under a closed canopy.[1]	Yes Recorded in a TVA Zone 4 Parcel
Appalachian bristle fern	Rocky seeps on non-calcareous rocks[5]	Little non-calcareous habitat
Barratt's sedge	Bogs, swamps, wet woods, usually on acidic substrate[5]	Likely
Beakrush	Sand and peat of ponds and lakeshores, depressions in savannas and flatwoods, seeps[5]	Likely
Beardgrass	Barrens[2]	Limited habitat
Blackfoot quillwort	Seasonal streambeds and wet depressions[2]	Likely
Broadleaf Barbara's-buttons	Understories of mixed hardwood forests along streams, in slightly disturbed sites.[5]	Likely
Broadleaf bunchflower	Mesic/dry, rocky, wooded slopes[5]	Somewhat likely
Butternut	Rich woods and hollows[2]	Likely
Canby's lobelia	Oak barrens, wet areas[2]	Likely
Cluster fescue	Wet woods and prairies[2]	Likely
Death-camas	Acidic wetlands[2]	Likely
Downy gentian	Barrens[2]	Limited habitat
Dwarf huckleberry	Xeric sandhills, pine oak uplands, barrens and heaths. Mesic to wet pine flatwoods, pine barrens, sometimes in seepage communities[5]	Limited habitat
Dwarf sundew	Moist sandy-peaty pinelands and roadsides[5]	Somewhat likely
Eaton's witchgrass	Sandy peaty pine barrens[2]	Limited habitat
Eggert's sunflower	Open barrens, open oak-history woodlands[5]	Likely
Elliott's blueberry	Open flatwoods and dry slopes[2]	Likely
Foxtail clubmoss	Bogs, marshes, ditches, and borrow pits[5]	Likely
Globe-fruited ludwigia	Swamps and shallow pools[2]	Likely
Grassleaf arrowhead	Pond and stream margins[2]	Likely
Large cranberry	Bogs, swamps, mires, wet shores and headlands[5]	Likely
Large-leaved grass-of-parnassus	Calcareous seeps[2]	Somewhat likely
Leggett's pinweed	Barrens[2]	Limited habitat
Limestone fame-flower	Glades[2]	Somewhat likely
Liverwort (*Frullania obcordata*)	Swamps, on tree bark[2]	Likely

Common Name	Habitat Requirements	Suitable Habitat Present
Liverwort (*Radula voluta*)	Damp shaded rocks along streams; 1772-3609-foot elevation[1]	Somewhat unlikely due to elevation
Loesel's twayblade	Calcareous seeps[2]	Somewhat likely
Low frostweed	Barrens[2]	Limited habitat
Maidencane	Ponds in barrens[2]	Limited habitat
Narrow blue flag	Wet barrens, wetlands[2]	Likely
Narrowleaf bushclover	Barrens[2]	Limited habitat
Nestronia (*Nestronia umbellula*)	Upland woods[2]	Likely
Ovate catchfly	Open oak woods[2]	Likely
Pale green orchid	Swamps, wetlands and floodplains[2]	Likely
Pale-purple coneflower	Rocky prairies, open wooded hillsides and glades[5]	Likely
Panic-grass (*Dichanthelium acuminatum* ssp. l*eucothrix*)	Moist pine barrens[2]	Somewhat likely
Ridge-stem false-foxglove	Barrens[2]	Limited habitat
Rose pogonia	Sphagnum bogs, poor fens, acidic sandy meadows, prairies, open wet woods, pine flatwoods, pine savannahs, cypress swamps, streambanks, seepage slopes, ditches, roadcuts[5]	Likely
Rough rattlesnake-root	Barrens and roadsides[2]	Somewhat likely
Sand cherry	Barrens[2]	Limited habitat
Sedge (*Carex hirtifolia*)	Lowland forests[2]	Likely
Sharp's lejeunea	Rocks, boulders, bluffs, cliff faces. Usually limestone, sometimes sandstone or dolomite.[1]	Likely
Southern twayblade	Wet mesic woods[2]	Likely
Spreading false-foxglove	Limestone bluffs shaded by oaks. Oak root parasite.[1]	Likely
Water-milfoil	Acidic wetland and ponds[2]	Likely
White-bract thoroughwort	Wet barrens[2]	Limited habitat
Wolf spikerush	Ephemeral pools in grasslands, oak woodlands on river terraces, limestone barrens[5]	Likely
Yellow-eyed-grass	Pond margins and marshes[2]	Likely

[1] Source: NatureServe 2016
[2] Source: TDEC 2014
[3] Source: Lady Bird Johnson Wildflower Center 2013
[4] Source: Hilty 2015
[5] Source: Flora of North America 1993

For information on plant communities and potential impacts of the draft RLMP, see Volume I, Section 3.5.3.

2.2.5.2 Terrestrial Wildlife

Reviews of the TVA Natural Heritage database indicate that there are three federally listed terrestrial species and 16 state-listed species in the counties surrounding Normandy Reservoir (see Table 2-8). Within 3 miles of the reservoir, eight listed species have been recorded (Table 2-10). Three of these species have been recorded on TVA parcels. These species and their habitat requirements are described in Table 2-10.

Table 2-10. Habitat Requirements for Terrestrial Wildlife Species of Conservation Concern within 3 Miles of Normandy Reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
Amphibians		
Hellbender	Creeks and rivers[1]	Likely
Tennessee cave salamander	Aquatic, cave obligate[1]	Likely
Birds		
Bald eagle	Forested areas near open water[1]. In Tennessee, overwintering on reservoirs and large rivers[2]	Yes Recorded in a TVA Zone 4 parcel
Insects		
Duck River cave beetle	Terrestrial cave obligate; Central Basin; Duck River drainage.[2]	Yes Recorded in TVA Zone 3 and 4 parcels
Mammals		
Allegheny woodrat	Rocky outcrops, cliffs. Usually at higher elevations[1]	Likely
Gray bat	Caves[1]	Yes Recorded in a TVA Zone 4 parcel
Indiana bat	In winter, hibernacula are found in caves. During summer, roosts are found in wooded or semi wooded areas that have suitable trees with loose bark[1]	Likely
Northern long-eared bat	In winter, hibernacula are found in caves. During summer, roosts are found in wooded or semi wooded areas that have suitable trees with loose bark[1]	Likely

[1] Source: NatureServe 2016
[2] Source: TDEC 2016a

2.2.5.2.1 Amphibians

Neither of the two listed amphibian species have known records within TVA parcels, however suitable habitat is likely present. There are 12 caves on TVA parcels that may provide habitat for the Tennessee cave salamander.

2.2.5.2.2 Birds

A pair of bald eagles were observed nesting within TVA parcels in 1985. Potentially suitable habitat for future nesting pairs and migrating birds is present within the reservoir, including on TVA parcels.

2.2.5.2.3 Insects

The Duck River cave beetle has not been observed since 1981 and is presumed extirpated. While habitat is present, it is unlikely that this species would be found in other caves on TVA parcels that surround Normandy Reservoir.

2.2.5.2.4 Mammals

There are no known records of the Allegheny woodrat on TVA parcels surrounding Normandy Reservoir, however there is one record within 3 miles of the reservoir. This species has frequently been observed in the vicinity of caves. It is possible that it may be observed nesting or foraging near one of the three caves within TVA property. One gray bat summer roosting cave occurs on a TVA parcel on this reservoir. It is possible that bats may use any of the other 11 caves around the reservoir. Northern long-eared bat and Indiana bat summer habitat is known from Coffee County. Several of the northern long-eared bat records are within 5 miles of Normandy Reservoir. The extensive forested habitat and caves around Normandy may be used by Indiana bat or northern long-eared bat for foraging or roosting.

For information on terrestrial wildlife and potential impacts of the draft RLMP, see Volume I, Section 3.5.4.

2.2.5.3 Aquatic Species

In the counties surrounding Normandy Reservoir, there are eight federally listed aquatic animal species and 28 state-listed aquatic animal species (see Table 2-8). Within 10 miles of the reservoir, there are four federally listed species and an additional 19 state-listed species (Table 2-11). There are five listed species recorded on TVA parcels and six listed species have been recorded within the reservoir.

Records of the helmet rocksnail, tan riffleshell mussel, and turgid blossom pearlymussel are located on a parcel that would be allocated as Zone 2 (Project Operations). The records of these three species are historic and they may be extirpated from the region.

Table 2-11. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Normandy Reservoir

Common Name	Habitat Requirement	Suitable Habitat Present
Fish		
Ashy darter[3]	Medium rivers, slow moving pools with gravel substrates[1]	Yes
Barrens darter	Headwaters of the Barren Fork and Hickory Creek drainages; Cumberland River watershed[2]	Unlikely
Barrens topminnow	Springs, spring runs, and first- and second-order headwaters and creeks in the Barrens of Cannon, Coffee, and Warren counties[2]	Unlikely
Bedrock shiner	Bedrock pools of headwaters and streams. Tolerates stagnant conditions[1]	Unlikely
Blotchside logperch[3]	Riffles and gravel runs of clear, small to medium rivers[1]	Yes
Coppercheek darter	Primarily in deep riffles, runs, and flowing pools; Duck and Buffalo River watersheds[2]	Likely
Flame chub	Springs and spring fed streams[1]	Somewhat likely
Longhead darter	Boulder and cobble strewn flowing pools of large creeks and small to medium rivers[1]	Likely
Redband darter	Limestone streams; Nashville Basin and portions of Highland Rim[2]	Likely
Rosyside dace	Upland tributaries of Little Tennessee River; east Tennessee.[2] Small clear streams[1]	Somewhat likely
Slenderhead darter	Small-large rivers with moderate gradient in shoal areas with moderate-swift currents; portions of Tennessee & Cumberland river watersheds[2]	Likely
Southern cavefish	Aquatic cave obligate; cave streams, karst waters, and water supply wells; reported from all karst regions[2]	Yes. Possibly extirpated. Recorded on a TVA Zone 4 parcel
Striated darter	Bedrock pools of headwaters and creeks with large slabrock cover; upper Duck River watershed[2]	Unlikely
Gastropods		
Helmet rocksnail[3]	Rocky substrates in riffle systems; bedrock in flowing water below main section of riffles; Duck River (Tennessee River system) [2]	Historic, possibly extirpated Recorded on a TVA Zone 2 parcel
Ornate rocksnail	Large rivers, does not readily adapt to reservoirs[1]	Unlikely
Rugose rocksnail[3]	Probably in the vicinity of riffles in medium rivers[1]	Yes. possibly extirpated, Historic record on a TVA Zone 4 parcel
Warty rocksnail	Rocky substrates in riffle systems; Elk River & larger tributaries (Tennessee River watershed) [2]	Somewhat likely
Mussels		
Pale lilliput[3]	Small tributary rivers & streams, in firm rubble, gravel, and sand substrates in shallow riffles and shoals; lower Tenn. River system[2]	Yes
Rockpile liptooth	Wet, grassy habitats, generally in full sun; barrens & remnant prairies; Coffee and Warren counties; disjunct from central Alabama[2]	Habitat limited

Common Name	Habitat Requirement	Suitable Habitat Present
Round hickorynut	Medium-large rivers in sand and gravel substrate with moderate flow; Tennessee and Cumberland rivers; also Red River in Robertson Co., W Highland Rim[2]	Likely
Slabside pearlymussel	Large creeks to medium rivers, in riffles/shoals of sand, fine gravel, and cobble substrates with medium current; Tennessee River watershed[2]	Likely
Tan riffleshell	Headwaters. Riffle sand shoals in gravel substrate[1]	Yes. possibly extirpated, Historic record on a TVA Zone 2 parcel
Turgid blossom pearlymussel*	Clear unpolluted water of fast flowing streams[1]	Yes. possibly extirpated, Historic record on a TVA Zone 2 parcel

[1] Source: NatureServe 2016
[2] Source: TDEC 2014
[3] Records within the Reservoir

For information on aquatic species and potential impacts of the draft RLMP, see Volume I, Section 3.6.

2.2.6 Water Quality

TDEC establishes water quality standards for individual waterbodies by identifying the most stringent criteria for each assigned use and considering the antidegradation status. The seven designated uses for the waterways of the State are defined in Rules of Tennessee Department of Environment and Conservation, Chapter 0400-40-04 and include: domestic water supply, industrial supply, fish and aquatic life, trout stream, naturally reproducing trout stream, livestock watering and wildlife, and irrigation. Waterbodies in Tennessee that do not fully support their designated uses based on a review of water quality data and information are considered to be impaired and included in the 303(d) list.

Normandy Reservoir is a tributary storage reservoir for flood control, water supply, and recreation purposes. It has a longer average hydraulic residence time (141 days) and a relatively large average depth of 36 feet. It has been assessed by TDEC as a fully supporting water body (TDEC 2016b). A segment of Duck River just upstream of the reservoir and a segment of Little Duck River have been listed as impaired due to sanitary sewer overflows, which could impact the water quality within the reservoir.

The most recent ratings for Normandy Reservoir from TVA's Reservoir Ecological Health Ratings program indicate that dissolved oxygen and chlorophyll are considered poor, and

sediment was considered good. Dissolved oxygen concentrations have been found to be poor in the deeper water near the dam. As in previous years, dissolved oxygen rated poor due to low concentrations in the lower water column near Normandy Dam. A poor chlorophyll rating has found at Normandy in recent years whereas it had been good prior to 1998. TVA has identified a possible cause of this change to be associated with an upwelling of nutrients from the lower water column caused by the aeration system. Sediment quality at Normandy has been rated good during all monitoring periods except in 2002, when sediment samples contained low levels of chlordane, and when arsenic concentrations were reported to be slightly higher than the expected background concentration.

TVA does not regulate or permit water supply intakes or waste water discharges concerning the water quality but TVA does have Section 26a permitting authority for physical intake or discharge structures and for water supply requests on Normandy. Water quality impacts associated with water supply intakes or waste water discharges are regulated by the states under the National Pollutant Discharge Elimination System. The most recent state permit/water withdrawal registration data for water supply withdrawals and waste water discharges directly from or to Normandy Reservoir indicates that the 2010 municipal water withdrawal volume was 5.69 million gallons per day. This information does not include withdrawals or discharges in the watersheds.

For information on water quality and potential impacts of the draft RLMP, see Volume I, Section 3.8.

2.2.7 Wetlands

Wetlands are transitional ecosystems between terrestrial and aquatic communities, where saturation with water is the dominant factor in determining the types of plants and animals present. Wetlands are ecologically important because of their beneficial effect on water quality, their moderation of flow regimes by retaining and gradually releasing water, their value as wildlife habitat, and as areas of botanical diversity. Wetlands exist within and adjacent to TVA reservoirs and are influenced by surface water and groundwater connections to the water levels in these reservoirs. The presence of wetlands immediately on or adjacent to TVA reservoirs is related to the land use characteristics and development status of the shoreline. Lands supporting more intense shoreline development are typically noted as having a decrease in wetland features.

Emergent wetlands typically occur in a narrow elevation zone centered on the summer pool elevation and contain water for much of the growing season. Vegetation typically includes

cattail, bulrush, arrowhead, and water plantain. Scrub-shrub wetlands are typically associated with reservoir shorelines and coves and are often transition zones between emergent and forested wetlands. The vegetation can include hardwood trees less than 15 feet tall, but are dominated by shrubs such as silky dogwood, red osier dogwood, buttonbush, alder, willow, and elderberry. Forested wetlands occur on lower-lying, undisturbed areas and along tributary streams on power generation sites. These areas are dominated by flood tolerant hardwood species such as oaks, maples, and ash.

Vegetated wetlands occur with greater frequency and size along the mainstem reservoirs and tailwaters than along the tributary reservoirs and tailwaters, such as Normandy. This is due in part to the larger-sized watersheds of mainstem reservoirs resulting in a greater volume of water; greater predictability of the annual hydrologic regime; shoreline and drawdown zone topography (wider and flatter floodplains, riparian zones, and drawdown zones and large areas of shallow water); and larger sections of relatively still, shallow-water areas. Wetlands tend to be smaller and do not occur as frequently on tributary reservoirs because of the relatively steep drawdown zones, the rolling to steep topography of adjacent lands, shoreline disturbance caused by wave action, and the lower predictability and shorter duration of summer pool levels. On tributary reservoirs, wetlands are typically located at the backs of coves where tributary streams enter the reservoir, and in very patchy, small (<0.01 acre) areas along the shoreline.

The information presented in this document is derived from the National Wetland Inventory database and supplemented with previous on-the-ground surveys done by TVA, including for the SMI EIS (TVA 1999). Field surveys were not performed for this RLMP to gather more up-to-date information regarding the types and locations of wetlands within the Normandy Reservoir. Most of the non-open water wetlands within the Normandy Reservoir are forested with only a small amount of emergent wetlands (Table 2-12).

Table 2-12. Wetland Types within the Normandy Reservoir

Wetland Type	Acres
Emergent	4.0
Forested	109.6
Open Water	195.8
Total	**309.4**

Source: USFWS 2016

Some of the wetland areas within the reservoir are present in local, state, and federally managed areas—including wildlife refuges, Wildlife Management Areas (WMA), national

forests, parks, and recreation areas—and TVA-designated sites, including small wild areas, habitat protection areas (HPA), and ecological study areas (Section 2.2.11).

For information on wetlands and the potential impacts of the draft RLMP, see Volume I, Section 3.9.

2.2.8 Floodplains

The area encompassed by the RLMP extends from the lower limit of TVA's property, below the Normandy Dam at approximate Duck River mile 246.6, upstream to about Duck River mile 266.7. Normandy Dam is located at Duck River mile 248.6. The 100-year floodplain is the area that would be inundated by the 100-year flood (base flood).

Flood elevations have not been computed for the Normandy reservoir. For information on the potential impacts of the draft RLMP on floodplains, see Volume I, Section 3.10.

2.2.9 Air Quality

In accordance with the Clean Air Act Amendments of 1990, all counties that include parts of the Normandy Reservoir are designated with respect to compliance, or degree of noncompliance, with the National Ambient Air Quality Standards (NAAQS). The NAAQS have been established to protect the public health and welfare with respect to six pollutants: particulate matter, sulfur dioxide, carbon monoxide, ozone, nitrogen dioxide, and lead. An area with air quality better than the NAAQS is designated as "attainment;" an area with air quality worse than the NAAQS is designated as "non-attainment." Bedford and Coffee counties are considered in attainment for all NAAQS. No wilderness areas or parks designated Prevention of Significant Deterioration Class I air quality area occur near the Normandy Reservoir. General information about air emissions and climate change are identified in Volume I.

Sources of air emissions within TVA lands along the Normandy Reservoir occur at the campground and dam facilities and from truck and vehicle transportation. Within Normandy Reservoir, lands that would be allocated to Zone 2 (Project Operations) have the greatest potential to support uses that produce higher levels of air emissions.

Air emissions generated within Normandy Reservoir vary with type of activity/development. Currently, air emissions from uses on TVA lands on the Normandy Reservoir are low. Future projects that have the potential to affect ambient air quality would be planned in detail to minimize air emission impacts and would comply with Clean Air Act regulations.

For information on air quality and the potential impacts of the draft RLMP, see Volume I, Section 3.11.

2.2.10 Cultural and Historic Resources

Cultural resources include prehistoric and historic archaeological sites, districts, buildings, structures, and objects, as well as locations of important historic events that lack material evidence of those events. Cultural resources that are listed, or considered eligible for listing, on the National Register of Historic Places (NRHP) are called historic properties. To be considered an historic property, a cultural resource must possess both integrity and significance. A historic property's integrity is based on its location, design, setting, materials, workmanship, feeling, and association. The significance is established when historic properties meet at least one of the following criteria: (a) are associated with important historical events or are associated with the lives of significant historic persons; (b) embody distinctive characteristics of a type, period, or method of construction; (c) represent the work of a master, or have high artistic value; or (d) have yielded or may yield information important in history or prehistory (36 Code of Federal Regulations [CFR] Part 60.4).

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effects of their proposed undertakings on historic properties and provide the Advisory Council on Historic Preservation an opportunity to comment on those effects. TVA determined that the draft RLMP (Alternative B) is an "undertaking" as defined by the regulations under NHPA. Once an action is determined to be an undertaking, the regulations require agencies to consider whether the proposed activity has the potential to impact historic properties. If the undertaking is such an activity, then the agency must follow the following steps: (1) involve the appropriate consulting parties; (2) define the area of potential effects (APE); (3) identify historic properties in the APE; (4) evaluate possible effects of the undertaking on historic properties in the APE; and (5) resolve adverse effects (36 CFR § 800.4 through 800.13). An APE is defined as the "geographic area or areas within which the undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist" (36 CFR § 800.16). Concerning cultural resources, the APE is taken as the affected environment for purposes of this EIS. TVA defined the APE to be the approximately 1,034.9-acre area where TVA is proposing in its draft RLMP (Alternative B) to change the current Zone allocations (Alternative A).

Section 106 of the NHPA requires federal agencies to consult with the respective State Historic Preservation Officer (SHPO) and Indian tribes when proposed federal actions could affect historic and cultural resources, including archaeological resources, which are also protected

under the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act, in addition to the NHPA.

2.2.10.1 Archaeological Resources

The Normandy Reservoir region has been an area of human occupation for the last 13,500 years. This includes five broad cultural periods: Paleo-Indian (>9,200 BC), Archaic (9,200-1,000 BC), Woodland (1,000 BC-AD 900), Mississippian (AD 900-1,500), and Historic (AD 1,500-present). These divisions are based on stylistic changes in artifact types and technological and cultural adaptations. Prehistoric land use and settlement patterns vary during each period, but short- and long-term habitation sites are generally located on flood plains and alluvial terraces along rivers and tributaries. Specialized campsites tend to be located on older alluvial terraces and in the uplands. The region has been in use by Euro-Americans since the late eighteenth century (Haskell and Smith 2912).To protect travelers and encourage permanent settlement, Fort Nash was established in 1793 near Beech Grove. Coffee County was created from parts of Bedford, Warren, and Franklin counties in 1836 and named for General John Coffee, a political ally of Andrew Jackson (West 2009). Coffee County's economic development followed a general farming mode of agriculture, historically oriented toward the self-sufficient individual farmer (Riedl et al. 1976). Corn was the most important crop from early settlement in the 1790s until cotton became the most important cash crop in the early 1800s (Riedl et al. 1976).

Archaeological investigations were conducted prior to the impoundment of the Duck River for the Normandy Reservoir. The Normandy Archaeological Project was a series of rescue excavations designed to document the archaeological history of the area before it was submerged (Faulkner and McCollough 1973). Salvage efforts were conducted in the Duck River Valley area from 1971 until the summer of 1975, prior to the completion of the dam in 1976. Fieldwork on the Normandy project began by investigation of surface collections to determine the intensity of prehistoric occupation in this portion of the Valley. Cultural phases from the Middle Archaic to the Late Mississippian were identified as a result of the project. Due to the fact that the Normandy excavations was salvage project based on opportunistic identification, it is difficult to discern what percentage of land on Normandy has been subject to systematic archaeological testing. Thus, archaeological surveys have not been conducted on all of the lands involved in this land planning process. Moreover, many of the previously reported archaeological sites have not been assessed for their NRHP eligibility. Within the 1034.9 acres

subject to TVA's zone reallocation, these limited archaeological surveys resulted in the identification of 30 archaeological sites.

2.2.10.2 Historic Structures

The acquisition of land for Normandy Reservoir resulted in the removal of many structures and other man-made features. The few structures that remain represent all historical periods including individual farmsteads or larger scale plantations, civic or religious sites such as churches, cemeteries or schools, and industrial sites such as mills. TVA has conducted a survey of all of the major dams that TVA built. Normandy, while TVA's largest non-power dam, was included in this survey and TVA is currently in the process of nominating Normandy Dam and its associated facilities to the NRHP. The presence of other historic structures on Normandy Reservoir cannot be ruled out until a historic structure inventory has been conducted as part of a project-specific environmental review (all projects occurring on TVA land receive such a review as part of the NEPA process). All projects occurring on TVA land receive project-specific reviews as part of compliance with NEPA and NHPA.

For more information on cultural resources and the potential impacts of the draft RLMP, see Volume I, Section 3.12.

2.2.11 Natural Areas and Ecologically Significant Sites

Natural areas include managed areas, ecologically significant sites, and Nationwide Rivers Inventory (NRI) streams. Managed areas include lands held in public ownership that are managed by an entity (e.g., TVA, State of Tennessee, Coffee County) to protect and maintain certain ecological and/or recreational features. A management plan or similar document defines what types of activities are compatible with the intended use of the managed area. Ecologically significant sites are tracts of privately owned land either that are recognized by resource biologists as having significant environmental resources or identified tracts on TVA lands that are ecologically significant, but not specifically managed by TVA's Natural Areas Program. NRI streams are free-flowing segments of rivers recognized by the National Park Service as possessing outstandingly remarkable natural or cultural values that may potentially qualify them as part of the National Wild and Scenic Rivers System.

The TVA Natural Heritage database indicates that there are six natural areas on or within TVA parcels along Normandy Reservoir; one of which is managed by the TVA Natural Areas Program. An additional eight natural areas lie within 3-miles of Normandy Reservoir. The natural areas along Normandy Reservoir include TWRA and TVA lands. For more information on managed areas and sensitive ecological sites, see Volume I, Section 3.13 or Appendix D.

2.2.12 Aesthetics and Visual Resources

The visual character of the Normandy Reservoir is typical of many central Tennessee River valleys. Much of the river corridor is bordered by tall bluffs and steep, rocky forested banks with less than 5 percent of the land sloping gently enough for comfortable human use. The land away from the river consists primarily of gently rolling topography and relatively shallow, gently flowing tributary streams. The countryside is a varied mix of woodland, open pastures, crop land, and mostly small communities. The natural and cultural elements come together to provide variety, scenic attractiveness, and visual harmony around the mostly rural reservoir.

Views of the reservoir are limited due to the topography. Residential growth is occurring along the ridgetops and back-lying slopes near the shoreline to provide residents with views of the reservoir. The reservoir is also visible to visitors and other members of the public at TVA facilities at the dam reservation and other recreational areas on and near the reservoir.

For information on visual resources and the potential impacts of the draft RLMP, see Volume I, Section 3.14.

2.2.13 Noise

Sources of noise within lands along the Normandy Reservoir include those associated with developed recreation sites, and uses related to TVA project operations and various public works projects. Characteristics of noise emissions associated with common land uses are identified in Volume I of the EIS, Section 3.15.

Lands allocated to Zone 5 (Industrial) have the greatest potential to support uses that produce high levels of noise. The most common measurement of sound and environmental noise is the A-weighted decibel scale (dBA). This is a logarithmic scale that ranges from 0 dBA to about 140 dBA and approximates the range of human hearing. Common sources of noise from industrial uses include: heavy trucks; rail and barge operations; and industrial workplaces. Noise emission levels for these sources can range from 85 dBA to 100 dBA (U.S. Department of the Interior [USDOI] 2008) and are dependent on the distance from the noise source. Lands allocated to Zone 2 (Project Operations) and Zone 6 (Developed Recreation) also have the potential to generate noise, but typically to a lesser degree than industrial development. The primary sources of noise from land allocated to Zone 2 are the Normandy Dam Reservation, access roads, boat-launching ramp, and parking area. Noise emission levels for these sources can range from 70 dBA to 85 dBA (USDOI 2008) and are also dependent on the distance from the noise source. The primary source of noise from land allocated to Zone 6 would be commercial marinas and motorized watercraft (motor boats, jet skis), and road traffic. Noise

emission levels for land uses allocated to this zone can range from 40 dBA (very quiet) to 90 dBA (jet ski). Noise levels for motor boats and jet skis may also exhibit short elevated bursts of noise as a result of speed of the watercraft and other operational factors.

TVA land that would be allocated to Zone 3 (Sensitive Resource Management), Zone 4 (Natural Resource Conservation) and Zone 7 (Shoreline Access) account for the majority (78 percent) of land uses at Normandy Reservoir. Such land uses generally would not create noise emissions that would have an effect on the ambient noise environment and reflect a general environment consisting of low noise levels.

Approximately 22 percent of land along the reservoir would be allocated to zones that would support land uses with the potential for noise emissions (Zones 2 and 6 – Project Operations and Developed Recreation).

Noise from land uses varies with the type of development and would attenuate with distance from the source and as such, the noise level around the reservoir is relatively low. Any future projects on parcels that have the potential to affect noise emissions would be planned in detail and may be expected to consist of both water-dependent facilities and other common actions as well as new developments as allowed per each land use zone.

2.2.14 Socioeconomics and Environmental Justice

2.2.14.1 Population and Economy

The population of the Normandy Reservoir area, which contains only two counties, Bedford County and Coffee County is described in Table 2-13. As of 2015, Bedford County had an estimated population of 47,183 and Coffee County had a population of 54,277. From 2010 to 2015, the counties in the area increased in size by 4.7 and 2.8 percent, respectively. Both of the counties are also projected to grow from 2015 to 2020; however Coffee County is projected to grow at nearly two times the rate of Bedford County at 10.3 percent. Compared to the state of Tennessee, the Normandy Reservoir area counties are significantly more rural in distribution of population. Bedford County is 55.6 percent rural and 47.3 percent of the Coffee County population is rural.

As presented in Table 2-14, from 2010 to 2014, an average of 5.5 percent of the population within the Normandy Reservoir area was unemployed. Neither of the two counties within the area exceeded the state unemployment rate of 6 percent during that period. Similar to the state of Tennessee, Management, Business Science, and Arts and Sales and Office are the two largest employment categories for the counties in the area. Neither Bedford County nor Coffee County has a household median income equal to or greater than the state of Tennessee's,

which is $44,621. The median household income for 2010 to 2014 for Bedford County was $40,989 and $39,656 for Coffee County.

Table 2-13. Population and Percent Growth – Normandy Reservoir

Population	County		State
	Bedford	Coffee	Tennessee
Population (2020 - Projection)	49,664	59,888	7,195,375
Population (2015 - Estimate)	47,183	54,277	6,600,299
Population (2014 - Estimate)	45,660	53,151	6,451,365
Population (2010)	45,058	52,796	6,346,105
Projected Growth (2015-2020)	5.3%	10.3%	8.3%
Percent Change (2010-2015)	4.7%	2.8%	3.9%
Percent Change (2010-2014)	1.3%	0.7%	1.6%
Percent Rural (2010)	55.6%	47.3%	33.6%

Sources: USCB 2015 and USCB 2010a.

Table 2-14. Employment and Income, 2010-2014 – Normandy Reservoir

Employment and Income	County		State
	Bedford	Coffee	Tennessee
Civilian Employed Population 16 Years and Over	19,032	21,217	2,835,895
Management and Business Science and Arts	26%	32%	34%
Service Occupations	15%	17%	17%
Sales and Office	22%	24%	25%
Natural Resources, Construction, and Maintenance	15%	8%	9%
Production, Transportation and Material Moving	23%	20%	15%
Percent of Population > 16 years Unemployed	5%	6%	6%
Median Household Income	$40,989	$39,656	$44,621

Source: USCB 2010b

2.2.14.2 Environmental Justice

EO 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” formally requires Federal agencies to incorporate Environmental Justice as part of NEPA. Specifically, it directs them to address, as appropriate, any disproportionately high and adverse human health or environmental effects of their actions, programs, or policies on minority and low-income. Although TVA is not one of the agencies subject to this order, TVA routinely considers Environmental Justice impacts as part of the project decision-making process.

The minority population in the Normandy Reservoir area varies substantially from one county to the other; however minority populations in both of these counties is smaller than the minority population of the state of Tennessee (Table 2-15). In 2010, minorities comprised 22.8 percent of the population of Bedford County, and 11.1 percent of the population of Coffee County. The percent of the population below the poverty level from 2010 to 2014 only varied 0.2 percent from Bedford County to Coffee County; however both county poverty rates were higher than the state's 17.8 percent.

Table 2-15. Minority Population and Poverty, 2010-2014 – Normandy Reservoir

Minority Population and Poverty	County		State
	Bedford	Coffee	Tennessee
Total Population	45,660	53,151	6,451,365
White Alone[1]	38,954	48,384	5,029,109
Black or African American Alone[1]	2,810	1,151	1,082,001
American Indian and Alaska Native Alone[1]	366	194	17,656
Asian Alone[1]	363	563	98,441
Native Hawaiian and Other Pacific Islander Alone[1]	0	3	3,256
Two or More Races	1,615	1,010	122,662
Hispanic or Latino[2]	5,234	2,063	309,828
Percent Minority	22.8%	11.1%	25.4%
Percent of Population Below Poverty Level	21.1%	21.3%	17.8%

[1]Includes persons reporting only one race
[2]Hispanics may be of any race, so also are included in applicable race categories.
Source: USCB 2010b.

For more information about socioeconomics and the potential impacts of the draft RLMP, please see Volume I, Section 3.16 of the EIS.

2.3 Major Features of Normandy Reservoir

2.3.1 Natural Resource Management

Through implementation of the NRP, TVA's natural resource management programs focus on protecting and enhancing the biological resources of the Valley. This is accomplished through the continued evaluation of biological resources, which allows TVA to preserve sensitive resources (e.g., threatened and endangered species) and unique resources (e.g., old growth bottomland hardwood stands), as well as conserve renewable resources (e.g., forests and native warm season grasses) in a sustainable manner to support diverse habitats for wildlife populations.

The NRP programs promote environmentally sustainable recreational use on TVA-managed lands. Dispersed recreation, such as camping, bank fishing, and hiking, can create both positive and negative impacts on natural resources. TVA strives to reduce negative impacts to habitats or species while providing users with sustained, high-quality recreational experiences.

Finally, partnerships and cooperative projects with state and other federal agencies and nongovernmental organizations have been developed in an effort to support current biological resources management efforts.

2.3.2 Normandy Fish Hatchery

Normandy Fish Hatchery is a 205-acre facility managed by TWRA and used primarily for the propagation of warm water game fish. This facility produces fish that are stocked to support the increasingly-important sport fishing industry in Tennessee. The Normandy Fish Hatchery is located just downstream from Normandy Dam on the Normandy Dam Reservation. TWRA owns and operates ten hatcheries throughout the state of Tennessee (TWRA 2016). More information about TWRA fish hatcheries can be found at http://www.tn.gov/twra/.

2.3.3 Short Springs Natural Area

The Short Springs area lies on Carroll Creek and Bobo Creek at Duck RM 253.6 on Normandy Reservoir. The site marks the edge of the eastern highland rim escarpment from which Bobo descends into the Central Basin. Spring wildflowers, cascades, waterfalls and a 1.5-mile trail system make this area a popular destination. Rare plant species present include nestronia (*Nestronia umbellula*), broadleaf bunchflower (*Melanthuim latifolium*), ginseng (*Panax quinquefolius*), goldenseal (*Hydrastil canadensis*) and Barbara buttons (*Marshallia trinervia*). The biological diversity is related to the rich forest slopes and ravines, low cascades, springs, and waterfalls. Short Springs encompasses 420 acres including the state-managed Short Springs Designated State Natural Area (DSNA) and the Short Springs TVA Small Wild Area. The DSNA is owned in part by the State of Tennessee and the rest is under a conservation easement with the City of Tullahoma, owned by the Tullahoma Utilities Board. The Tennessee Department of Environment and Conservation's Department of Natural Heritage manages the DSNA in cooperation with the Friends of Short Springs, a local support group.

2.4 The Future Management of Reservoir Lands

Varying types of land management or conservation techniques coupled with development could occur along Normandy Reservoir. The implementation of the NRP would drive the types of programs conducted on TVA lands set aside due to natural or sensitive resources. Business opportunity, overall economy, local incentives, and community planning practices are factors

that could contribute to the types of industry locating or expanding along the reservoir. Recreation demand is driven by population levels, recreation participation rates, changing preferences for different types of recreation, and innovations in recreation equipment. Residential development is often times opportunistic; however, the lands set aside for such use are based on the types of property rights conveyed by TVA upon sale of the property or established via TVA policy. The TVA lands managed by other federal, state, or local agencies would most likely continue to do so in a similar manner.

CHAPTER 3. LAND PLANNING PROCESS

3.1 Process for Planning Land

The reservoir land management planning process involves allocation of TVA fee-owned land to seven defined land use zones. The term “land use zone” refers to a descriptive set of criteria given to distinct areas of land based on location, features, and characteristics. The land use zone definitions listed in Table 3-1 are identical to those listed in the NRP. The definition of a land use zone provides a clear statement of how TVA will manage public land, and allocation of a parcel to a particular land use zone identifies that land for specific uses. Implementation of an RLMP minimizes conflicting land uses and makes it easier to handle requests for use of public land.

This draft RLMP was developed by a team of land managers and technical experts from TVA, knowledgeable about the reservoir and its resources. The planning team made land use decisions by integrating public needs, environmental conditions, economic benefits, state and federal policies, and the original congressional intent of the Normandy Reservoir project. The process includes information from resource data, computer analysis, the public, other agencies, and knowledgeable TVA staff. This draft RLMP is consistent with the strategic direction of the NRP and meets the objections of the CVLP. Furthermore, the categorization and management of TVA-owned shoreline access land along Normandy Reservoir tiers from the SMI EIS (TVA 1999).

The planning process is completed once TVA conducts an environmental review of the draft RLMP as well as reasonable alternatives, in compliance with NEPA. This process allows the public and intergovernmental partners to review TVA’s proposed allocations and provide input.

Table 3-1. Land Use Zone Definitions

Zone	Definition
Zone 1 Non-TVA Shoreland	Shoreland that TVA does not own in fee. This land may be privately owned or owned by a governmental entity other than TVA. Uses of this non-TVA land may include residential, industrial, commercial, and/or agricultural. In many instances, TVA may have purchased the right to flood and/or limit structures on this non-TVA land (i.e., flowage easement). TVA’s permitting authority under Section 26a of the TVA Act applies to construction of structures on non-TVA shoreland. Non-TVA shoreland allocations are based on deeded rights and, therefore, will not change as a result of the lands planning process. This category is provided to assist in comprehensive evaluation of potential environmental impacts of TVA’s allocation decision.

Zone	Definition
Zone 2 Project Operations	Land currently used, or planned for future use, for TVA operations and public works projects, including: • Land adjacent to established navigation operations — Locks, lock operations and maintenance facilities, and the navigation work boat dock and bases. • Land used for TVA power projects operations — Generation facilities, switchyards, and transmission facilities and rights-of-way. • Dam reservation land — Areas acquired and managed for the primary purpose of supporting the operation and maintenance of TVA dams and associated infrastructure; secondary uses may also include developed and dispersed recreation, maintenance facilities, miscellaneous TVA field offices, research areas, and visitor centers. • Navigation safety harbors/landings — Areas used for tying off commercial barge tows and recreational boats during adverse weather conditions or equipment malfunctions. • Navigation dayboards and beacons — Areas with structures placed on the shoreline to facilitate navigation. • Public works projects — Includes rights-of-way for public utility infrastructure, such as sewer lines, water lines, transmission lines and major highway projects.
Zone 3 Sensitive Resource Management	Land managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment. Recreational natural resource activities, such as hunting, wildlife observation, and camping on undeveloped sites, may occur in this zone, but the overriding focus is protecting and enhancing the sensitive resource the site supports. Areas included are: • TVA-designated sites with potentially significant archaeological resources. • TVA public land with sites/structures listed in or eligible for listing in the National Register of Historic Places**.** • Wetlands — Aquatic bed, emergent, forested, and scrub-shrub wetlands as defined by TVA. • TVA public land under easement, lease, or license to other agencies/individuals for resource protection purposes. • TVA public land fronting land owned by other agencies/individuals for resource protection purposes. • Habitat protection areas — These TVA natural areas are managed to protect populations of species identified as threatened or endangered by the U.S. Fish and Wildlife Service, state-listed species, and any unusual or exemplary biological communities/geological features. • Ecological study areas — These TVA natural areas are designated as suitable for ecological research and environmental education by a recognized authority or agency. They typically contain plant or animal populations of scientific interest or are of interest to an educational institution that would utilize the area. • Small wild areas — These TVA natural areas are managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural, scenic, or aesthetic qualities that can also support dispersed, low-impact types of outdoor recreation.

Zone	Definition
	• River corridor with sensitive resources present — A river corridor is a segment of a river and the adjacent land along the banks. River corridors often consist of a linear green space of TVA land serving as a buffer to tributary rivers entering a reservoir. These areas will be included in Zone 3 when identified sensitive resources are present. • Significant scenic areas — Areas designated for visual protection because of their unique vistas or particularly scenic qualities. • Champion tree site — Areas designated by TVA as sites that contain the largest known individual tree of its species in that state. The state forestry agency "Champion Tree Program" designates the tree, while TVA designates the area of the sites for those located on TVA public land. • Other sensitive ecological areas — Examples of these areas include heron rookeries, uncommon plant and animal communities, and unique cave or karst formations.
Zone 4 Natural Resource Conservation	Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Areas included are: • TVA public land managed for wildlife or forest management projects. • TVA public land under easement, lease, or license to other agencies for wildlife or forest management purposes. • TVA public land fronting land owned by other agencies for wildlife or forest management purposes. • Dispersed recreation areas maintained for passive, dispersed recreation activities, such as hunting, hiking, bird watching, photography, primitive camping, bank fishing, and picnicking. • Shoreline conservation areas — Narrow riparian strips of vegetation between the water's edge and TVA's back-lying property that are managed for wildlife, water quality, or visual qualities. • Wildlife observation areas — TVA natural areas with unique concentrations of easily observed wildlife that are managed as public wildlife observation areas. • River corridor without known sensitive resources present — A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. River corridors will be included in Zone 4 unless sensitive resources are known to be present (see Zone 3). • Islands where sensitive resources are not known to be present or support existing development.
Zone 5 Industrial	Land currently used, or planned for future use, for economic development, including businesses in distribution/processing/assembly and manufacturing. Preference will be given for businesses requiring water access. There are two primary types of uses for TVA land allocated for Industrial: (1) access for water supply or structures associated with navigation such as barge terminals, mooring cells, etc., or (2) land-based development potential. Areas included are: • TVA public land under easement, lease, or license to other agencies/individuals/ entities for industrial purposes. • TVA public land fronting land owned by other agencies/individuals/entities for industrial purposes.

Zone	Definition
	In some cases, TVA land allocated to industrial use would be declared surplus and sold at public auction. Types of development that can occur on this land are: • Industry — Manufacturing, fabrication, and distribution/processing/assembly involving chemical, electronics, metalworking, plastics, telecommunications, transportation, and other industries. Industry does not include retail or service-based businesses. • Industrial access — Access to the waterfront by back-lying property owners across TVA property for water intakes, wastewater discharge, or conveyance of commodities (i.e., pipelines, rail, or road). Barge terminals are associated with industrial access corridors. • Barge terminal sites — Public or private facilities used for the transfer, loading, and unloading of commodities between barges and trucks, trains, storage areas, or industrial plants. • Fleeting areas — Sites used by the towing industry to switch barges between tows or barge terminals that have both offshore and onshore facilities. • Minor commercial landing — A temporary or intermittent activity that takes place without permanent improvements to the property. These sites can be used for transferring pulpwood, sand, gravel, and other natural resource commodities between barges and trucks.
Zone 6 Developed Recreation	Land currently used, or planned for future use, for concentrated, active recreational activities that require capital improvement and maintenance of developed infrastructure, including: • TVA public land developed for recreational purposes, such as campgrounds, day use areas, etc. • TVA public land under easement, lease, or license to other agencies/individuals/entities for developed recreational purposes. • TVA public land fronting land owned by other agencies/individuals/entities for developed recreational purposes. Residential use, long-term accommodations, and/or individually owned units are not permitted on land allocated for developed recreation. Types of development that can occur on this land are: • Public recreation — Recreation amenities developed and owned by a public agency that are open to the public. Public recreation areas may have varying levels of development, ranging from a water access site (e.g., launching ramp) to a marina facility. Facilities at public recreation areas could include playgrounds/play structures, picnic facilities, tennis courts, horseshoe areas, play courts, recreation centers, trails, greenways, natural areas, amphitheaters, food concessions (vending, snack bar), access to water for fishing and boating, swimming areas and swimming pools, launching ramps, courtesy piers, canoe access, marina facilities owned by the public entity, parking, and campgrounds. Cabins or other overnight accommodations (other than campgrounds) are only permitted if the public recreation area is operated by a state or state agency as a component of a state park system. • Public recreation areas and facilities are typically owned and operated by the federal, state, county, or local government. However, private entities may operate recreation facilities on public recreation land as concessionaires under agreement with the public entity controlling the property. The use of the facilities may be offered free or for a fee. Time-

Zone	Definition
	forward, public-private partnerships where facilities are owned by private investors will not be approved on public recreation land. All structures and facilities should be owned by the public entity. • Commercial recreation — Recreation amenities that are provided for a fee to the public intending to produce a profit for the private owner/operator. These primarily water-based facilities typically include marinas and affiliated support facilities such as stores, restaurants, campgrounds, and cabins and lodges. Where applicable, TVA will require appropriate compensation for the commercial use of the property.
Zone 7 Shoreline Access	TVA-owned land where Section 26a applications and other land use approvals for residential shoreline alterations are considered in accordance with TVA's Shoreline Management Policy. Types of development/management that may be permitted on this land are: • Residential water use facilities, e.g., docks, piers, launching ramps/driveways, marine railways, boathouses, enclosed storage space, and nonpotable water intakes. • Shoreline access corridors, e.g., pathways, wooden steps, walkways, or mulched paths that can include portable picnic tables and utility lines. • Shoreline stabilization, e.g., bioengineering, riprap, gabions, and retaining walls. • Shoreline vegetation management.

Prior to proposing parcel allocations, the TVA planning team reviewed the characteristics of each parcel (i.e., location and existing conditions). TVA also reviewed deeds of selected tracts previously sold to private entities to identify existing shoreline access rights. In addition, the planning team honored all existing commitments—that is, existing leases, licenses, and easements. No sensitive resources surveys were conducted on committed land. The need for field reviews for uncommitted parcels was determined based on data from the TVA Natural Heritage database. Land with sensitive resources known to be present was proposed to be placed in Zone 3 (Sensitive Resource Management). The remaining parcels were proposed to be allocated based on reservoir planning objectives and public input. Proposed management of each parcel was made by consensus among the TVA planning team. When developing the draft RLMPs, the planning team identified proposed allocations of reservoir parcels to one of seven planning zones using the zone definitions listed above.

In developing draft RLMPs, TVA proposes to allocate lands currently committed to a specific use to a zone compatible with that use unless there is an overriding need to change the use. Some committed land uses are determined by the covenants and provisions of easements, leases, licenses, and sale and transfer agreements. Committed lands include the following: properties where TVA has granted land rights (easements, leases, etc.) for specific uses, properties where TVA has previously identified resources in need of protection, Project

Operations lands (transmission lines, dam reservations, public infrastructure, etc.), and lands fronting WMAs. Possible reasons to change a committed land use would be to prevent or remedy ongoing adverse impacts resulting from the actions of a license or easement holder.

TVA does not consider which specific activity would be permitted on each parcel as part of its land use planning process. As explained in Volume 1 of the EIS (Section 1.7), many individuals provided input to TVA during the EIS scoping period and requested that TVA permit horseback riding on its public lands on Normandy Reservoir. Because such considerations are outside of the scope of this planning effort, TVA is not specifically addressing the issue of horseback riding in the draft RLMP for Normandy Reservoir.

Approximately 1,861 acres (38.8 percent) of the TVA land surrounding Normandy Reservoir are committed due to existing agreements, TVA operations, or other public infrastructure projects. Agricultural licenses are not considered as committed uses because they are an interim use of TVA land.

Approximately 2,935 acres (61.2 percent) of the TVA land surrounding Normandy Reservoir are uncommitted. Technical specialists collected field data on portions of some uncommitted parcels to identify areas containing sensitive resources. Representatives from various TVA organizations met to propose how these uncommitted lands should be allocated into the seven planning zones. The location of known and potentially sensitive resources was used in determining the capability and suitability of potential uses for each parcel of land.

3.2 Normandy Reservoir Goals and Objectives

The NRP established long-term land planning goals and objectives. While these goals and objectives were established to guide planning decisions across the Valley, these same goals and objectives can be applied when planning specific reservoirs.

Goal

TVA will strive to continue to balance shoreline development, recreational use, sensitive and natural resource management, use and other land uses in a way that maintains the quality of life and other important values across the region.

Objectives

Apply a systematic method of evaluating and identifying the most suitable uses of TVA public lands using resource data, stakeholder input, suitability and capability analyses, and TVA staff input.

- Identify land use zone allocations to optimize public benefit and balance competing demands for the use of public lands.
- Identify land use zone allocations to support TVA's broad regional resource development mission. TVA reservoir properties are managed to provide multiple public benefits, including recreation, conservation, and economic development.
- Provide a clear process by which TVA will respond to requests for use of TVA public land.
- Comply with federal regulations and executive orders.
- Enhance the protection of significant resources, including threatened and endangered species, cultural resources, wetlands, unique habitats, natural areas, water quality, and the visual character of the reservoir.
- Provide a mechanism that allows local, state, and federal infrastructure projects when the use is compatible with the zone allocation.

3.3 Parcel Allocations

TVA's land planning process (Section 3.1) along with the goals and objectives specific to Normandy Reservoir (Section 3.2) were used to develop this draft RLMP. Through this process, TVA proposes allocations of each reservoir parcel to one of the seven planning zones as indicated in Table 3-2.

Table 3-2. Summary of Proposed Land Use Allocations for the Draft Normandy Reservoir Land Management Plan (Alternative B)

Allocation Designation		Number of Parcels	Acres
Zone 2	Project Operations	7	790.7
Zone 3	Sensitive Resource Management	3	371.7
Zone 4	Natural Resource Conservation	12	3,365.7
Zone 5	Industrial	0	0
Zone 6	Developed Recreation	6	258.8
Zone 7	Shoreline Access	2	10.4
Total		**30**	**4,797.3**

Figure 3-1 represents the percent of land acreage on Normandy Reservoir that would be allocated to each land use zone under the draft RLMP (Alternative B). A detailed description of each zone and the identification of the land zoned by each category is presented below.

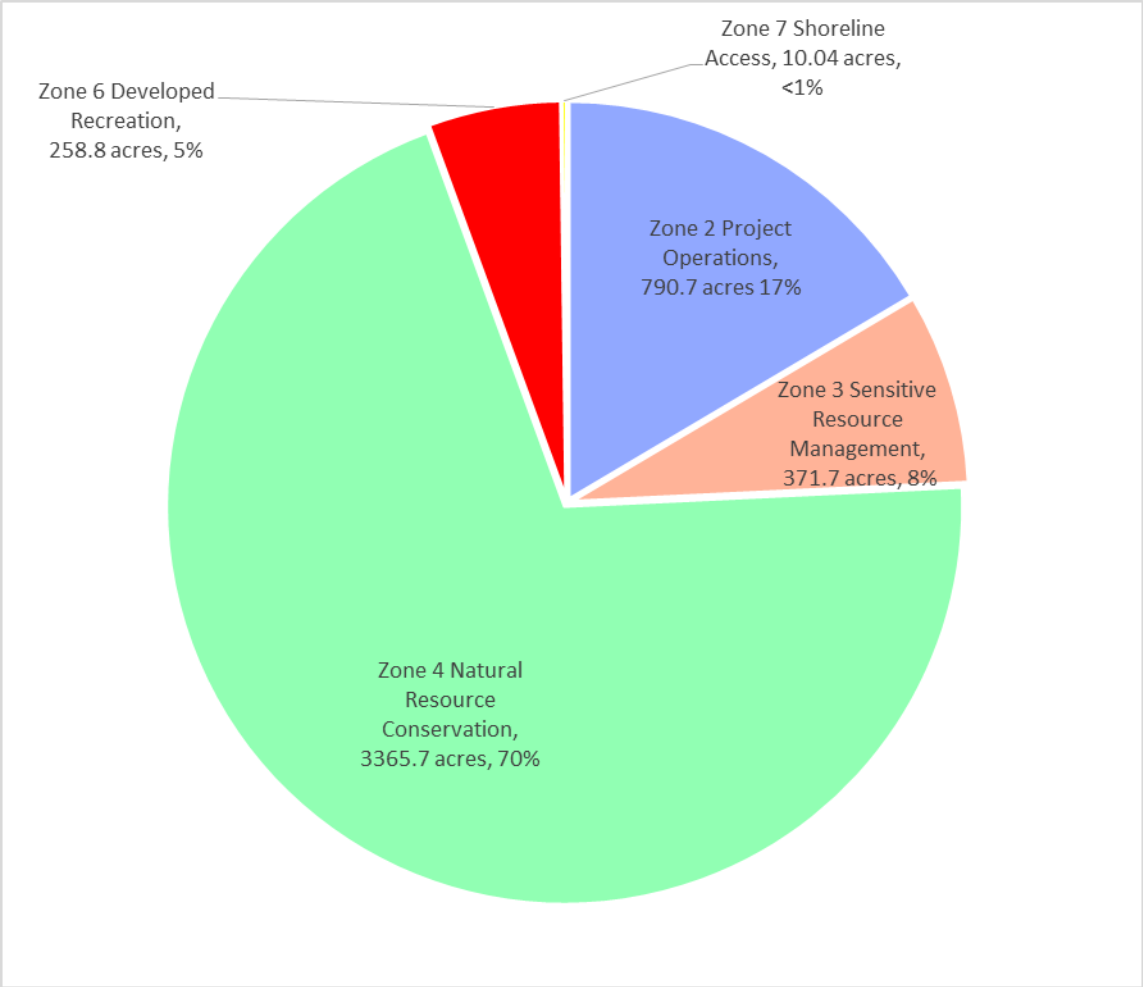


Figure 3-1. Percent of Normandy Reservoir Acreage Allocated by Zone

- Zone 2 (Project Operations). Zone 2 encompasses all TVA land currently used for TVA operations and public works projects. There are 790.7 acres that would be allocated to Zone 2 (Project Operations). The largest parcel to be allocated as Zone 2 is the Normandy Dam Reservation. Normandy Dam is managed by TWRA under a license agreement. Existing development includes the TWRA fish hatchery, roadways, canoe launch site, and boat-launching ramp.

- Zone 3 (Sensitive Resource Management). Zone 3 lands are managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment. Approximately 8 percent (371.7 acres) of the TVA land on Normandy reservoir would be allocated to Zone 3 under the proposed RLMP (Alternative B). The parcels included in this allocation represent areas where high-quality wetland habitat, wildlife habitat, scenic buffers, or cultural and historic resources are present. The largest parcels that would be allocated to Zone 3 are Parcels 18 and 26. Parcel 18 is a valuable river corridor that is largely undisturbed and Parcel 26 consists of steep topography along the shoreline and contains trails that lead to this parcel from the nearby Short Springs Natural Area.
- Zone 4 (Natural Resource Conservation). Zone 4 lands are managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Under the proposed draft RLMP (Alternative B), approximately 70 percent of the TVA owned land on Normandy Reservoir would be allocated to Zone 4 (3,365.7 acres). The largest parcel that would be allocated to Zone 4 is Parcel 2, which is the Normandy WMA and consists of three non-contagious tracts of land that are managed by TWRA.
- Zone 5 (Industrial). Zone 5 lands are managed for economic development including businesses in distribution/processing/assembly and light manufacturing. No land around this reservoir is allocated to Zone 5.
- Zone 6 (Developed Recreation). Lands that would be allocated to Zone 6 are currently used or planned for recreational purposes, such as public launching ramps or parks. For example, Parcel 29 comprises the 143 acres Barton Springs Campground. This area was developed by TVA, but is managed by a private entity. Approximately 5 percent (258.8 acres) of TVA-owned land around Normandy Reservoir would be allocated to Developed Recreation.
- Zone 7 (Shoreline Access). Only two parcels would be allocated to Zone 7, which are TVA-owned lands where Section 26a applications and other land use approvals for residential shoreline access would be considered. Requests for residential shoreline

access are considered on parcels identified in this zone where such use was previously considered, and/or where the back-lying landowner possesses deeded rights of access, and where the proposed use would not conflict with the interests of the public.

These proposed allocations vary somewhat from the estimates for Normandy Reservoir contained in the 2011 CVLP. In 2011, TVA anticipated that some parcels of land may be better allocated to different land use zones than those initially identified. As discussed in Volume I of the EIS, TVA proposes to update the target allocations of the CVLP based on the eight proposed RLMPs and to recalibrate the CVLP with the periodic updates to the NRP. Table 3-3 compares the proposed RLMP and the 2011 CVLP estimates for Normandy Reservoir.

Table 3-3. Draft Normandy Reservoir Land Management Plan (Alternative B) and 2011 Comprehensive Valleywide Land Plan Comparison

Allocation Designation		Draft Normandy Reservoir Land Management Plan	2011 Comprehensive Valleywide Land Plan
Zone 2	Project Operations	17%	13%
Zone 3	Sensitive Resource Management	8%	15%
Zone 4	Natural Resource Conservation	70%	67%
Zone 5	Industrial	0%	0%
Zone 6	Developed Recreation	5%	4%
Zone 7	Shoreline Access	<1%	1%

For the following reasons, this draft RLMP allocates a greater number of lands to all land use zones except Zone 3 (Sensitive Resource Management) and Zone 7 (Shoreline Access). A fewer number of acres would be allocated to Zone 3 (Sensitive Resource Management) and Zone 7 (Shoreline Access) than estimated in the 2011 CVLP. These lands would be placed into the more appropriate designations, as discussed below:

Zone 2 (Project Operations)
TVA has a number of transmission lines that cross TVA lands surrounding Normandy Reservoir. In addition, there are roads located on TVA lands with easements to the appropriate managing agency. The 2011 CVLP underestimated the amount of lands encumbered with transmission lines and roadways resulting in an increase of lands allocated to Zone 2 (Project Operations) during development of the RLMP.

Zone 3 (Sensitive Resource Management)
The greatest change from the 2011 CVLP and this draft RLMP occurs within the Zone 3 (Sensitive Resource Management) designation. A large tract located on the left descending

bank of Carroll Creek would be allocated for Zone 4 (Natural Resource Management) due to the absence of known sensitive resources. Additional areas would be allocated for Zone 2 due to transmission line and road rights-of-way (ROWs). During the planning effort, these changes resulted in less lands being placed in the Zone 3 category.

Zone 4 (Natural Resource Management)
Under the proposed RLMP, TVA proposes to allocate numerous parcels that were allocated in the 2011 CVLP to Zone 3 (Sensitive Resource Management) to Zone 4 (Natural Resource Management) because there are no known records of sensitive resources on the parcels.

Zone 5 (Industrial)
After reviewing the availability of public infrastructure and the presence of sensitive resources, TVA proposes to place no lands in the Zone 5 (Industrial) category. This is consistent with the 2011 CVLP.

Zone 6 (Developed Recreation)
The 2011 CVLP underestimated the amount of land designated for Zone 6 (Developed Recreation) on Normandy Reservoir. The planning team reviewed recreational trends and the possibility of creating new recreation sites. This analysis resulted in slightly more lands being proposed for the Zone 6 category.

Zone 7 (Shoreline Access)
The 2011 CVLP correctly estimated the amount of former TVA property encumbered with shoreline access rights.

Of the 4,797.3 acres on Normandy Reservoir, there are no proposed allocation changes to 3,397.8 acres (70.8 percent); all proposed allocation changes involve 1,399.5 acres (29.2 percent). Of the 1,399.5 acres, TVA would allocate 1,006.3 acres (71.9 percent) to reflect existing land use agreements or commitments. The remaining 393.2 acres (28.1 percent) involve proposed parcel allocations that are not based on existing land use agreements or commitments. See Appendix B for parcel allocation description tables.

3.4 Property Administration

As stewards of public land, TVA uses the RLMP, along with TVA policies and guidelines, to manage resources and to respond to requests for the use of TVA land. Inquiries about or requests for the use of TVA land can be made to the TVA Public Land Information Center at 800-TVA-LAND or 800-882-5263 between 8 a.m. and 6 p.m. Eastern time Monday through Friday.

Pursuant to the TVA Land Policy, TVA would consider changing a land use designation outside of the normal planning process only for the purpose of water access for industrial or commercial recreational operations on privately owned back-lying land or to implement TVA's SMP.

Additionally, there are a small number of TVA parcels in the Valley that have deeded access rights for shoreline access that are currently utilized for other uses such as commercial recreation and industrial. Should the private back-lying land become residential, a request for a change of allocation of the parcel to Zone 7 (Shoreline Access) would be subject, with the appropriate environmental review, to action by the TVA Board or its designee or to Board-approved policy.

Consistent with the TVA Land Policy, those parcels or portions of parcels that have become fragmented from the reservoir may be declared surplus and sold at public auction. Public works/utility projects, such as easements for pipelines, power or communication wires, roads, or other public infrastructure, proposed on TVA land that would not substantially change the zoned land use or adversely impact sensitive resources would not require an allocation change as long as such projects would be compatible with the use of the allocated zone. Proposed public works/utility projects would be subject to a project-specific environmental review. Any other requests involving a departure from the planned uses would require appropriate approval. Proposals consistent with TVA's policies and the allocated use, and otherwise acceptable to TVA, will be reviewed in accordance with NEPA and must conform to the requirements of other applicable environmental regulations and other legal authorities.

CHAPTER 4. PARCEL DESCRIPTIONS

This chapter describes the proposed land use determined to be most suitable for each parcel of TVA land as shown on the plan maps (Appendix A, Panels 1-2). The parcel descriptions include the acreage rounded to the nearest tenth and the planned land use. Relevant data regarding the proposed land use are provided for each tract and include existing land uses, physical characteristics of the land, presence of existing private water use facilities, and any special considerations related to the future use. All existing private water use facilities with TVA permits are grandfathered, provided they are constructed in accordance with the plans approved by TVA.

Parcel 1 – (641.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is the Normandy Dam Reservation and receives heavy public use. Existing facility development includes TWRA fish hatchery, roadways, canoe launch site, and boat launching-ramp. The boat launching-ramp located above Normandy Dam is managed by TWRA under a license agreement. There is currently a term agricultural license below Normandy Dam for hay production. Historic records of listed species, helmet rocksnail (*Lithasia duttoniana*), tan riffleshell (*Epioblasma florentina walkeri*), and turgid blossom pearlymussel (*Epioblasma turgidula*) have been recorded on this parcel in the Duck River. This parcel has a high probability for the presence of cultural resources, but it has not been adequately surveyed. Requests for private water use facilities would not be considered.

Table 4-1. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bedford and Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	79–NE and 86–NW
TVA D-Stage Map Numbers	2
Stream Mile and Bank	Duck River Mile 246.5 to 248.5B
Land Use / Land Cover	Upland hardwood forest and open fields
Known Dispersed Recreation Opportunities	Bank fishing

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Permanent easement to South Central Bell for telephone utilities • Permanent easement to the Town of Normandy, Tennessee and Coffee County, Tennessee for roadway • Permanent easement to Tennessee Wildlife Resource Agency for a fish hatchery • Revocable license to City of Wartrace, Tennessee for water utilities • Revocable license to Tullahoma Airport Authority for a radio beacon tower • Term agricultural license for hay production
Potential Projects	None identified
Potential Partners	• Tennessee Wildlife Resources Agency • Town of Normandy, Tennessee • Bedford County, Tennessee • Coffee County, Tennessee

Parcel 2 – (856.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is the Normandy WMA. It consists of 3 non-contagious tracts of land that are managed by TWRA. The most westerly tract is adjacent to the Normandy Dam Reservation, and the other two tracts are divided by the Cedar Point Public Use Area. This parcel stretches 5 shoreline miles along the right descending banks of the Duck River and Riley Creek. The current land cover is mixed upland hardwoods with pockets of cedar in various locations. This tract has steep and variable topography and is mainly accessible by boat; however, there are two adjacent roadways, Roberts Ridge Road and Cedar Point Road. Two caves are known on this parcel. This parcel has a medium probability for the presence of cultural resources. There are known archaeological sites and at least one historic cemetery, but this parcel has not been adequately survey. No existing shoreline improvements are currently present and requests for private water use facilities would not be considered.

Table 4-2. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Bedford and Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	79–NE and 86–NW
TVA D-Stage Map Numbers	1, 2 & 9
Stream Mile and Bank	Duck River Miles 249 to 251R and Riley Creek Mile 0 to 1.5R
Land Use / Land Cover	Mixed upland hardwoods and pines

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Hunting, hiking, fishing, and primitive camping
Current Agreements/Commitments	• Permanent easement to Coffee County for roadway • Revocable land use permit to Tennessee Wildlife Resource Agency for a WMA • Permanent easement to a private land owner for a driveway • Permanent easement to South Central Bell for telephone utilities
Potential Projects	• Systematic survey for historic properties
Potential Partners	Tennessee Wildlife Resource Agency

Parcel 3 – (1.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This small parcel is located at the headwaters of Boyd's Branch and contains a portion of the ROW for Roberts Ridge Road. The intent of this parcel is to support the road ROWs. In locations where the ROWs and wildlife management are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered. This parcel has a low probability for the presence of cultural resources, but has not been adequately surveyed.

Table 4-3. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	1
Stream Mile and Bank	Boyd Branch Mile 1B
Land Use / Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None
Current Agreements/Commitments	Permanent easement to Coffee County, Tennessee for a roadway
Potential Projects	None identified
Potential Partners	Coffee County, Tennessee

Parcel 4 – (10.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is the Boyd's Branch Boat Ramp and is located along the left descending bank of the Boyd's Branch. This parcel is accessible via Roberts Ridge Road. TVA constructed this boat launching-ramp and parking area, but the facility is currently managed by TWRA under a license agreement. This parcel has a medium probability for the presence of cultural resources but has not been adequately surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation would be considered.

Table 4-4. Parcel Information

Location Component	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D−Stage Map Numbers	1
Stream Mile and Bank	Duck River Mile 249.5R

Parcel 5 – (27.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is the Cedar Point Campground and is located on the right descending bank of the Duck River. This parcel was originally developed by TVA, but the area is currently managed by Recreation Resource Management under a 30-year easement. Facilities include a campground, picnic facilities, swimming beach, and a boat launching-ramp. This parcel is accessible via Cedar Point Road. This parcel received a Phase 1 Cultural Resource survey in 2012; however, no new archaeological sites where identified. This parcel has a low probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation would be considered.

Table 4-5. Parcel Information

Location Component	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D−Stage Map Numbers	9
Stream Mile and Bank	Duck River Mile 250.5R

Parcel 6 – (242.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large non-contiguous narrow parcel is located along both banks of Riley Creek and the right descending bank of Fuller Branch. The headwaters of Riley Creek provide a small wetlands area and dispersed recreation, namely bank fishing. This parcel provides a visual buffer between private land owners and Normandy Reservoir. The majority of this parcel is steep terrain that is covered with upload hardwoods. Two caves are known on this parcel. One know population of American ginseng, a state-listed species of concern is known to occur on this parcel. Additionally, there are historic records of two listed species, southern cavefish (*Typhilichthys subterraneus*), and the Duck River cave beetle (*Psuedanophthalmus tullahoma*). This parcel has a medium probability for the presence of cultural resources. There are known archaeological site, but this parcel has not been adequately surveyed. Historically, unauthorized vegetation management has occurred on this parcel and will continue to be addressed. Existing previously approved private water use facilities would be allowed to remain; however, requests for new private water use facilities would not be considered.

Table 4-6. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	85–SW and 86–NW
TVA D-Stage Map Numbers	9 and10
Stream Mile and Bank	Riley Creek Miles 1.4 to 3.4B
Land Use / Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Bank Fishing
Current Agreements/Commitments	None identified
Potential Projects	• Systematic survey for historic properties
Potential Partners	None identified

Parcel 7 – (9.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one contiguous tract of land located along the right descending bank of Riley Creek. The parcel begins north of TVA monument 11-24 and extends downstream to monument 11-45. Riley's Creek and Lake Hills Subdivisions are located on the backlying private property. The current land cover is primarily hardwood forest with some maintained lawns. This parcel has a medium probability for the presence of cultural resources, but it has not been

adequately surveyed. Two caves are known to occur on this parcel. This parcel should be evaluated for the presence of additional caves and rock shelters. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4-7. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	85–SW and 86–NW
TVA D-Stage Map Numbers	10
Stream Mile and Bank	Riley Creek Miles 2 to 2.5R
Land Use / Land Cover	Upland hardwoods
Fronts Former TVA Tract (s)	None identified
Structure Profile	None identified
Current Agreements/Commitments	Approved water use facilities

Parcel 8 – (10.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located at the headwaters of Riley Creek and contains apportion of the ROWs for Cathey Ridge Road, Lake Hills Road, and Walden Ridge Road. The intent of this parcel is support the road ROWs. This parcel has a low probability for the presence of cultural resources; however, this parcel has not been adequately surveyed. In locations where the ROWs and wildlife management are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered.

Table 4-8. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	85–SW
TVA D-Stage Map Numbers	10
Stream Mile and Bank	Riley Creek Mile 2.8B
Land Use / Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None
Current Agreements/Commitments	Permanent easement to Coffee County, Tennessee for a road right-of-way
Potential Projects	None identified
Potential Partners	Coffee County, Tennessee

Parcel 9 – (1.0 acre)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of one tract of land located along the left descending bank of Riley Creek. The Riley Creek portion of this parcel lies between TVA monuments 10-40 and 10-41. Daniel and Edna Ruth Shelton Subdivision is located on the back-lying private property. The current land cover is primarily hardwood forest. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. There are known archaeological sites near the vicinity of this parcel. This parcel has a medium probability of the presence of cultural resources, but it has not been adequately surveyed.

Table 4-9. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	8 and 9
Stream Mile and Bank	Riley Creek Mile 0.9L and Fuller Branch Mile 0.7R
Land Use / Land Cover	Upland hardwoods
Fronts Former TVA Tract (s)	None identified
Structure Profile	None identified
Current Agreements/Commitments	Approved water use facilities

Parcel 10 – (304.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large contiguous tract of land is located along the right descending of the Duck River. This tract is situated between Haley Branch and Fuller Branch and accessible via Barnett Road. The current land cover consists of upland hardwoods with a mixture of cedar along the shoreline. Features of this tract include steep topography with rocky slopes that have historical provided habitat for bald eagles. This tract has received unauthorized horse trail abuse that will continue to be addressed by TVA. The northern portion of this tract has an agricultural license to a private individual for hay production. This parcel is a popular dispersed recreation area, namely hunting and hiking. This parcel has a medium probability of the presence of cultural resource but has not been adequately surveyed. Severe erosion has occurred on this parcel, and there are known archaeological sites. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-10. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	8
Stream Mile and Bank	Duck River Mile 251.2 to 251.9R
Land Use / Land Cover	Upland hardwoods with a mixture of cedar
Known Dispersed Recreation Opportunities	Hunting, hiking, bank fishing, primitive camping
Current Agreements/Commitments	Term agricultural license for hay production
Potential Projects	• Systematic survey for historic properties • Continue efforts to control unauthorized horse trail construction and use • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary
Potential Partners	Normandy horse-back riding enthusiasts

Parcel 11 – (36.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROWs for Lyndell Bell Road and Barnett Road. The intent of this parcel is support the road ROWs. In locations where the ROWs and wildlife management or public recreation are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered. This parcel has a low probability for the presence of cultural resources.

Table 4-11. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	3 and 8
Stream Mile and Bank	Duck River Mile 252B
Land Use / Land Cover	Maintain lawn and road right-of-way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easement to Coffee County, Tennessee for a roadway • Permanent easement to South Central Bell for telephone utilities • Revocable license to Duck River Electric Membership Corporation for utilities
Potential Projects	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Partners	• Coffee County, Tennessee • South Central Bell • Duck River Electric Membership Corporation

Parcel 12 – (253.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is located along the right descending bank of the Duck River. The parcel is adjacent to Lyndell Bell Road and is mainly accessible by boat. The current land cover is upland hardwoods with a mixture of cedars and reverting agricultural fields. This tract has old agricultural fields that have been reverting to early successional cover since the mid 1990's. Currently, there is an agricultural license to a private individual for hay production. Disperse recreational opportunities include hunting, hiking, and primitive camping. This parcel has not been adequately surveyed for the presence of cultural resources; however, there are known archaeological sites nearby. This parcel has a medium probability for the presents of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-12. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86-NW
TVA D-Stage Map Numbers	8
Stream Mile and Bank	Duck River Mile 252 to 253.1R
Land Use / Land Cover	Upland hardwoods, cedar, and agricultural fields
Known Dispersed Recreation Opportunities	Hunting, hiking, and camping
Current Agreements/Commitments	Term agricultural license for hay production
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 13 – (236.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of three non-contiguous tracts of lands located along the right descending bank of the Duck River. This parcel is divided by the Wards Chapel Boat Ramp and a transmission line. The tract of land located north of the Wards Chapel Ramp is a steep and narrow parcel with upland hard woods. This tract is adjacent to Fire Lake Subdivision and Lakeview Subdivision. Two caves are known on this parcel.

The tracts southeast of Wards Chapel Ramp are locally known as Devils Backbone and provide disperse recreational opportunities, namely hunting. This tract is also adjacent to Mt. View Road and receives informal bank fishing. There is currently an agricultural license for hay production adjacent to Devils Backbone Lane. The current land cover of this tract is upland hardwoods, eastern red cedar, and agricultural fields.

This parcel has not been adequately surveyed, but there are known archaeological sites present. This parcel has a high probability for the presence of cultural resources. Existing previously approved water use facilities would be allowed to remain; however, request for new or expansions to existing private water use facilities would not be considered.

Table 4-13. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	7 and 11
Stream Mile and Bank	Duck River Mile 253.1 to 255R
Land Use / Land Cover	Upland hardwoods, red cedar, and agricultural fields
Known Dispersed Recreation Opportunities	Hunting, hiking, and bank fishing
Current Agreements/Commitments	• Term agricultural license for hay production • Revocable license to Fire Lake Homeowners Association for recreation use
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 14 – (19.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is the Wards Chapel Boat Ramp and is located along the right descending bank of the Duck River. This parcel includes a boat launching-ramp, courtesy pier, and parking area. This facility was developed by TVA and is currently managed by TWRA under a license agreement. This parcel is accessible via River Forge Road. This parcel has not been adequately surveyed for the presence of cultural resources; however, there are known archeological sites nearby. This parcel has a medium probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4-14. Parcel Information

Location Component	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D−Stage Map Numbers	7
Stream Mile and Bank	Duck River Mile 255.3R

Parcel 15 – (95.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of a transmission line that stretches across the Duck River, through Neil Peninsula, and across Carrol Creek. The City of Tullahoma waste water treatment plant and water intake station are also located on this parcel. This parcel has a medium probability of the presence of cultural resources, but it has not adequately been surveyed. In locations where the transmission line and wildlife management are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered.

Table 4-15. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	3, 4, and 7
Stream Mile and Bank	Duck River Mile 255B
Land Use / Land Cover	Upland hardwood forest
Known Dispersed Recreation Opportunities	None

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Permanent easement to the City of Tullahoma, Tennessee for a waste water treatment plant and water intake station. • Permanent easement to the City of Tullahoma, Tennessee, for underground water utilities
Potential Projects	None identified
Potential Partners	City of Tullahoma, Tennessee

Parcel 16 – (4.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for Mt View Road. The intent of this parcel is to support the road ROWs. This parcel has a low probability for the presence of cultural resource; however, it has not been adequately surveyed. In locations where the ROWs and wildlife management or public recreation are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered.

Table 4-16. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	7 and 11
Stream Mile and Bank	Duck River Mile 259.5B
Land Use / Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None
Current Agreements/Commitments	Permanent easement to Coffee County, Tennessee for a roadway
Potential Projects	None identified
Potential Partners	Coffee County, Tennessee

Parcel 17 – (187.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This long narrow strip of land stretches 3 shoreline miles along the shoreline on the right descending bank of the Duck River. This tract is covered with upland hardwoods and has steep topography along the shoreline. This parcel is accessible by boat which allows for hunting along the shoreline. This parcel has not been adequately surveyed for cultural resources; however, there are known archaeological sites present, including one historic cemetery. Two areas of this

parcel have a high probability for the presence of cultural resources, but the remainder has a low to medium probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-17. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	11 and 12
Stream Mile and Bank	Duck River Miles 259.5 to 263.4R
Land Use / Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Bank fishing, hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 18 – (177.0 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel consists of two non-contiguous tracts of land along both banks of the Duck River. This current land cover is upland hardwoods. The northern tract has a mixture of gentle terrain while the southern parcel has steep terrain. Dispersed recreation opportunities include hunting, and fishing by boat access only. This is a valuable river corridor that is largely undisturbed. This parcel has a high probability for the presence of cultural resources, but it has not been adequately surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-18. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86-NW, 86-NE
TVA D-Stage Map Numbers	12, 13, and 14
Stream Mile and Bank	Duck River Miles 262.5 to 265.1B
Land Use / Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Hunting and fishing

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 19 – (15.9 acres)

Proposed RLMP Allocation: Zone 6 – Developed Recreation

This parcel is adjacent to Powers Bridge Road and is located along both banks of the Duck River. The tract lies along the upper end of the reservoir where the narrow, scenic character of the reservoir makes it attractive to boat fishing and paddle sports activities. The Old Stone Fort State Archaeological Area is situated approximately 2 river miles upstream from this parcel. The parcel is currently undeveloped but receives some informal recreation use such as bank fishing. Future development could include paddle sport boat access accommodations and shoreline fishing facilities. This parcel has a high probability for the presence of cultural resources; however, it has not been adequately surveyed. Requests for use of TVA lands and associated water-based structures to support developed recreation would be considered.

Table 4-19. Parcel Information

Location Component	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D−Stage Map Numbers	13
Stream Mile and Bank	Duck River Mile 265.5B

Parcel 20 – (1.5 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains a portion of the ROW for Powers Bridge Road. The intent of this parcel is to support the road ROWs. In locations where the ROWs and wildlife management or public recreation are complementary, requests to support the adjacent land use would be considered. However, requests for private water use facilities would not be considered. This parcel has a low probability for the presence of cultural resources.

Table 4-20. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	7 and 11
Stream Mile and Bank	Duck River Mile 259.5B
Land Use / Land Cover	Road right-of-way
Known Dispersed Recreation Opportunities	None
Current Agreements/Commitments	Permanent easement to Coffee County, Tennessee for a roadway
Potential Projects	None identified
Potential Partners	Coffee County, Tennessee

Parcel 21 – (42.1 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel consists of two non-contiguous tracts of land along both banks of the Duck River. This current land cover is upland hardwoods. This parcel is a valuable river corridor that is largely undisturbed. This parcel has a high probability for the presence of cultural resources, but it has not been adequately surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-21. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW and 86–NE
TVA D-Stage Map Numbers	13
Stream Mile and Bank	Duck River Miles 265.5 to 266.7B
Land Use / Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 22 – (70.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This narrow parcel stretches 2 miles along the left descending bank of the Duck River. The land cover is mostly upland hardwoods with steep terrain along the shoreline. This parcel is only accessible by boat and provides limited disperse recreation opportunities. This parcel has a low probability for the presence of cultural resources, but it has not been adequately surveyed. Requests for private water use facilities would not be considered.

Table 4-22. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	11 and 14
Stream Mile and Bank	Duck River Mile 260.7 to 262.5L
Land Use / Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 23 – (42.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is adjacent to Mt. View Road and is currently undeveloped. This tract is located approximately five miles downstream from Parcel 19 and could serve as an access point for paddle sports. Portions of this parcel could also be developed for primitive camping and shoreline fishing. There are known archaeological sites within this parcel; however, it has not been adequately surveyed. This parcel has high probability of the presence of cultural resources. Requests for use of TVA lands and associated water based structures to support developed recreation would be considered.

Table 4-23. Parcel Information

Location Component	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D−Stage Map Numbers	11
Stream Mile and Bank	Duck River Mile 260.5L

Parcel 24 – (186.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This long and narrow contiguous tract of land stretches over seven miles along the left descending bank of the Duck River and both descending banks of Crumpton Creek. This parcel is accessible by boat only and provides limited dispersed recreation opportunities. The current land cover is upland hardwoods, and this parcel has steep terrain along the shoreline. There is one historical record of the state listed species, the rugose rock snail (*Lithasia jayana)* in the Duck River at Crumpton Creek. There are two caves on this parcel, one of which is a known gray bat summer roost. This parcel has not been adequately surveyed for cultural resources, but there is at least one historic cemetery present. This parcel has a medium probability for the presence of cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-24. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	6
Stream Mile and Bank	Duck River Mile 256.3 to 259.3L
Land Use / Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 25 – (471.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large tract of land is known as Neil Peninsula and is located along the left descending banks of Carroll Creek and the Duck River. The majority of this parcel is covered with upland hardwoods and small scattered pockets of eastern red cedar. This parcel has steep terrain along the shoreline and is relatively flats along the ridge top. This parcel is accessible via JD Neil Road and is a popular area for hunting, hiking, and primitive camping. This parcel has a history of unauthorized ATV abuse, and TVA will continue efforts to stop unauthorized use. This parcel is surrounding by numerous utility easements including transmission line and water utilities. One cave is within this parcel. This parcel has a high probability for the presence of cultural resources with at least two known cemeteries; however, this parcel has not been adequately surveyed. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-25. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	4 and 7
Stream Mile and Bank	Duck River Mile 253.7 to 256.3L
Land Use / Land Cover	Upland hardwoods and red cedar
Known Dispersed Recreation Opportunities	Hunting, hiking, and primitive camping
Current Agreements/Commitments	• Permanent easement to the City of Tullahoma for a waste water utility plant • Permanent easement to the City of Tullahoma for underground utilities
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties • Continue efforts to eliminate unauthorized use
Potential Partners	None identified

Parcel 26 – (152.6 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This large narrow parcel is located along both descending banks of Carrol Creek and Bobo Creek. Short Springs Natural Area is located at the headwaters of Bobo creek. This parcel is accessible by boat, but there are also trails that lead to this parcel from the Short Springs Natural Area. One cave is also located on this tract. A historic record of the state-tracked species the Duck River cave beetle (*Pseudanophthalmus tullahoma*) is known from within this cave. The current land cover is upland hardwoods with steep topography along the shoreline. Portions of this parcel have a high probability of the present of cultural resources, but the majority of the parcel has a medium probability. This parcel has not been adequately surveyed for historical properties. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-26. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	4 and 5
Stream Mile and Bank	Carroll Creek Miles 1.6 to 3.3B
Land Use / Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Hiking
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	City of Tullahoma

Parcel 27 – (293.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large contiguous tract of land is located along the left descending bank of Carroll Creek. This parcel is covered with upland hardwoods and has steep terrain located near the shoreline. Disperse recreational opportunities include hunting, hiking, and primitive camping with boat access only. This parcel has a medium probability for the presence of cultural resources but has not been adequately surveyed. There are known archaeological sites nearby. No existing

shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-27. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	3 and 4
Stream Mile and Bank	Carroll Creek Miles 0.3 to 1.8L
Land Use / Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Hunting, primitive camping, and hiking
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 28 – (126.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending banks of Carroll Creek and the Duck River. The current land cover is upland hardwoods with steep topography near the shoreline. This parcel is accessible by boat only and known disperse recreation opportunities include hunting and primitive camping. Portions of this parcel have a medium probability for the presence of cultural resources and other areas have a low probability. There are known archaeological sites nearby, but this parcel has not been adequately surveyed. Requests for private water use facilities would not be considered.

Table 4-28. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	3 and 8
Stream Mile and Bank	Duck River Miles 252.1 to 253.7L
Land Use / Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Hunting and primitive camping
Current Agreements/Commitments	None identified.

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

Parcel 29 – (143.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is the Barton Springs Campground and boat launching-ramp. It is located along the left descending bank of the Duck River and was developed by TVA. The campground is currently operated by Recreation Resource Management under a 30-year commercial recreation easement, and the boat launching-ramp is currently managed by TWRA under a license agreement. Existing amenities include a campground, picnic area, and swimming beach. The campground is accessible via Barton Springs Road, and the boat launching-ramp is accessible via Lyndell Bell Road. Future expansion of both commercial and public recreation facilities could be accommodated on undeveloped portions of this tract.

Most of this parcel was surveyed for cultural resources in 2012; however, no new archaeological sites were identified. Probable grave depressions and field stone markers were recognized on that portion of the parcel labeled "Negro Hill" during this survey. The boundaries of a possible cemetery have not been defined, although an area has been designated as a non-development zone because of these grave depressions. There is one part of this parcel adjacent to a bridge over the original Duck River that was not part of the 2012 survey. This un-surveyed area has a medium probability for the presence of cultural resources.

Requests for use of TVA lands and associated water based structures to support developed recreation would be considered.

Table 4-29. Parcel Information

Location Component	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D−Stage Map Numbers	2, 3, and 8
Stream Mile and Bank	Duck River Mile 252.0L

Parcel 30 – (135.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This non-contiguous tract of land is located along Frank Hiles Road and Lyndell Bell Road. The current land cover is upland hardwoods with steep topography. Known dispersed recreational opportunities include bank fishing and hunting. This parcel has a medium probability for the presence of cultural resources. There are known archaeological site nearby but this parcel has not been adequately surveyed for cultural resources. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4-30. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Coffee, Tennessee
Topographic Map (Sheet No. and Quadrant)	86–NW
TVA D-Stage Map Numbers	2 and 3
Stream Mile and Bank	Duck River Miles 250.4 to 251.4L
Land Use / Land Cover	Upland hardwoods
Known Dispersed Recreation Opportunities	Hunting and bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundary • Systematic survey for historic properties
Potential Partners	None identified

CHAPTER 5. PLANNING TEAM

Benjamin J. Bean

Position:	Program Manager, Reservoir Land Use and Permitting
Education:	M.S. Environmental Policy and Management; B.A. Biology
Experience:	10 years in Public Land Management and Permitting, 4 years in water quality, 2 years in environmental compliance monitoring
Involvement:	Planning Team and deed interpretation

Chellye L. Campbell

Position:	Senior Specialist, Land Policy
Education:	B.S., Biology
Experience:	15 years in Planning and Managing Land
Involvement:	Deed interpretation and Land Policy guidance

Jerry G. Fouse

Position:	Recreation Specialist
Education:	M.B.A., B.S., Forestry and Wildlife
Experience:	39 years in Natural Resources – Recreation Planning and Economic Development
Involvement:	Planning Team and Recreation Management

Martin B. High

Position:	Program Manager, Natural Resource Management
Education:	B.S., Forest Management
Experience:	27 years in Natural Resource Management, Land Management, and Permitting
Involvement:	Planning Team and Natural Resource Management

Thomas O. Maher

Position:	Senior Archaeologist
Education:	Ph.D., Anthropology
Experience:	33 years in the field of Archaeology
Involvement:	Planning Team and Cultural Resource Management

Leonard L. McCurdy, Jr.

Position:	Senior Specialist, Reservoir Land Use and Permitting
Education:	J.D., Law; B.S., Environmental Studies - Chemistry
Experience:	26 years in the field of Law including 19 years in TVA real property rights
Involvement:	Deed interpretation and Land Policy guidance

Heather L. Montgomery

Position:	Senior Program Manager, Reservoir Land Planning
Education:	B.S., Environmental Biology
Experience:	14 years in Planning and Managing Land and Environmental Impacts Evaluation
Involvement:	Program Manager

Mark T. Morrissey

Position:	Geographic Analyst
Education:	B.S., Geography
Experience:	2 year in Planning and Managing Land; 5 years in Industrial Safety and Compliance
Involvement:	Document Preparation; Planning Team; and Preparation of Geographic Information Systems

Karen E. Rylant

Position:	Senior Specialist, Section 26a Policy and Process
Education:	Ph.D., Agronomy (Soil Chemistry); M.S., Soil Fertility; B.A., Chemistry, B.A., Geology
Experience:	8 years in Environmental Research; 4 years in Land and Shoreline Management
Involvement:	Deed interpretation and Section 26a guidance

CHAPTER 6. LITERATURE CITED

Ahlstedt, S.A., Powell, J.R., Butler, R.S., Fagg, M.T., Hubbs, D.W., Novak, S.F., Palmer, S.R., and Johnson, P.D., 2004, Historical and current examination of freshwater mussels (Bivalvia: Margaritiferidae, Unionidae) in the Duck River basin Tennessee: Report to Tennessee Wildlife Resource Agency, 213 p.

Benson, A.J., D. Raikow, J. Larson, A. Fusaro, and A.K. Bogdanoff. 2016. Dreissena polymorpha. USGS Nonindigenous Aquatic Species Database, Gainesville, Florida. Retrieved from https://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=5 (accessed October 2016).

EDDMapS. 2016. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Retrieved from http://www.eddmaps.org/ (accessed October 2016).

Etnier, D. A. and W. C. Starnes. 1993. The Fishes of Tennessee. Knoxville: University of Tennessee Press.

Faulkner, C.H. and M. C. R. McCullough. 1973. Introductory Report of the Normandy Reservoir Salvage Project: Environmental Setting, Typology, and Survey. Normandy Archaeological Project Volume 1. University of Tennessee, Department of Anthropology, Report of Investigations No. 19.

Federal Register. 1999. Executive Order 13112 of February 3, 1999, Invasive Species, Federal Register, February 8, 1999/Presidential Documents.

Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. 19+ vols. New York and Oxford.

Haskel, Daniel, and J. Calvin Smith. 2012. 1844 A Complete Descriptive and Statistical Gazatteer of the United States of America. Sherman and Smith, New York. Electronic document. Retrieved from http://www.archive.org/details/completedescript01hask (accessed July 2012).

Hilty, John. 2015. Illinois Wildflowers. Retrieved from www.illinoiswildflowers.info (accessed July 2016).

Homer, C.G., Dewitz, J.A., Yang, L., Jin, S., Danielson, P., Xian, G., Coulston, J., Herold, N.D., Wickham, J.D., and Megown, K. 2015. Completion of the 2011 National Land Cover Database for the conterminous United States-Representing a decade of land cover change information. Photogrammetric Engineering and Remote Sensing, v. 81, no. 5, p. 345-354.

Hubbs, D., S. Chance, L. Colley, and R.S. Butler. 2010. Duck River Quantitative Mussel Survey. Tennessee Wildlife Resources Agency Fisheries Division Report 11-04. 48 pages.

Ladybird Johnson Wildflower Center. 2013. Native Plant Information Network, NPIN. Lady Bird Johnson Wildflower Center at The University of Texas, Austin, Texas. Retrieved from http://www.wildflower.org/plants/ (accessed July 2016).

NatureServe. 2016. NatureServe Web Service. Arlington, Virginia. U.S.A. Retrieved from http://services.natureserve.org (accessed July 2016).

Palmer, S.R. 2005. Conserving the Duck River: A Plan for Collaborative Action. The Nature Conservancy, Nashville, Tennessee.

Reidl, Norbert F., Donald B. Ball, Anthony P. Cavender 1976. A Survey of Traditional Architecture and Related Material Folk Culture Patterns in the Normandy Reservoir, Coffee County, Tennessee. Report of Investigations No. 17, University of Tennessee Department of Anthropology. Tennessee Valley Authority. Knoxville, Tennessee.

Southeast Exotic Pest Council. 2016. Invasive Plants of the Southeast. Retrieved from http://www.se-eppc.org/weeds.cfm (accessed August 2016).

Tennessee Department of Environment and Conservation. 2014. TDEC Rare Species data viewer. Retrieved from https://tn.gov/environment/article/tdec-dataviewers (accessed July 2016).

———. 2016a. Rare Species List by County. Retrieved from http://environment-online.state.tn.us:8080/pls/enf_reports/f?p=9014:3:9800907530530 (accessed August 2016.

———. 2016b. 2016 Draft 303(d) List. Retrieved from http://www.tennessee.gov/environment/article/wr-wq-water-quality-reports-publications (accessed August 2016).

Tennessee Exotic Pest Plant Council. 2009. TN-EPPC Invasive Exotic Pest Plants in Tennessee. December 2009 (2nd Edition). Retrieved from http://www.tneppc.org/ (accessed August 2016).

———. 2016. TN-EPPC Invasive Exotic Pest Plants in Tennessee. Retrieved from http://www.tneppc.org/invasive_plants (accessed August 2016).

Tennessee Wildlife Resource Agency. 2016. TWRA Fish Hatchery System. Retrieved from http://www.tn.gov/twra/article/twra-fish-hatchery-system:(accessed September 2016).

Tennessee Valley Authority. 1999. Shoreline Management Initiative (SMI): An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley Final Environmental Impact Statement. Retrieved from https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy (accessed October 2016).

———. 2005. Recreation Strategic Plan: A Framework for Providing Recreation Opportunities On and Along the Tennessee River 2004-2005.

———. 2011. Natural Resource Plan, Alabama, Georgia, Kentucky, Mississippi, North Carolina, Tennessee, and Virginia, Final Environmental Impact Statement. Retrieved from

https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan (accessed October 2016).

———. 2016a. Tennessee Valley Authority Natural Heritage Database, Data Received 2016.

———. 2016b. Reservoir Health Ratings. Retrieved from https://www.tva.gov/Environment/Environmental-Stewardship/Water-Quality/Reservoir-Health-Ratings (accessed July 2016).

———. 2016c. Tennessee Valley Authority Reservoir Vital Signs Monitoring Program Fish Collections, Data Received 2016.

U.S. Army Corps of Engineers. 2012. Duck River Watershed Tennessee Initial Watershed Assessment. Final Report. 57 pages.

U.S. Census Bureau. 2010a. USCB Population Division. Annual Estimates of the Resident Population: April 2010-July 1, 2015, UT Center for Business and Economic Research, 2003.

———. 2010b. American Fact Finder 2010-2014 American Community Survey, 5-year estimates Retrieved from http://factfinder.census.gov/ (accessed July 2016).

———. 2015. Annual Estimates of the Resident Population: April 1, 2010-July 1, 2015. Retrieved from http://factfinder.census.gov/ (accessed July 2016).

USDA NRCS. 2016. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Retrieved from http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed July 2016).

U.S. Department of the Interior. 2008. Reclamation: Managing Water in the West; Resource Management Plan, Navajo Reservoir Area, Colorado and New Mexico, Final Environmental Assessment and Finding of No Significant Impact, June 2008.

U.S. Environmental Protection Agency 2013. Level III Ecoregions of the Continental United States: Corvallis, Oregon, U.S. EPA– National Health and Environmental Effects Research Laboratory, map scale 1:7,500,000. Retrieved from https://pubs.usgs.gov/tm/04/c03/virtual_CD/useco.pdf (accessed July 2016).

U.S. Fish and Wildlife Service. 2016a. IPaC Trust Resources Report. Information, Planning and Conservation System. Retrieved from https://ecos.fws.gov/ipac/ (accessed October 2016).

U.S. Fish and Wildlife Service. 2016b. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Retrieved from http://www.fws.gov/wetlands/ (accessed July 2016).

U.S. Geological Survey. 2016. Land Cover Trends Project. Retrieved from http://landcovertrends.usgs.gov/main/ecoIndex.html (accessed July 2016).

West, Carroll Van. 2009. Tennessee Encyclopedia of History and Culture, Middle Tennessee State University.

This page intentionally left blank

GLOSSARY

acre	A unit measure of land area equal to 43,560 square feet
agricultural licensing	Some parcels or portions of parcels designated for other purposes or uses may also be suitable for interim agricultural licensing. These parcels have been identified using the criteria contained in TVA's agriculture instruction. Normal tenure for a TVA agricultural license is five years. Land with extreme erosion potential may not be licensed for agricultural use unless erosion and sediment controls, including the use of best management practices, can be successfully implemented. Further investigation and/or mitigation of adverse impacts to natural or cultural resources may be required prior to approval of license agreements.
cultural resources	Archaeological, historic, and architectural resources
dam reservation	Lands generally maintained in a park–like setting by TVA to protect the integrity of the dam structure, hydroelectric facilities, and navigation locks. The reservation also provides for public visitor access to the TVA dam facilities and recreation opportunities, such as public boat access, bank fishing, camping, picnicking, etc. Hunting is not typically allowed on dam reservations.
deciduous	Vegetation that sheds leaves in autumn and produces new leaves in the spring.
dispersed recreation	Recreation of an informal nature such as hunting, hiking, biking, bird watching, photography, primitive camping, bank fishing, and picnicking, that occur on TVA land. These activities are not associated with developed facilities although some improvements may occur for access, health and safety, or to protect the environment.
embayment	A bay or arm of the reservoir
emergent wetland	Wetlands dominated by erect, rooted herbaceous plants, such as cattails and bulrushes.
endangered species	A species in danger of extinction throughout all or a significant part of its range. Endangered species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.
Environmental Policy	A TVA Board–approved policy that communicates guiding principles to lead TVA successfully in the reduction of its environmental impact while continuing to provide reliable and competitively priced power to the Valley
floodplain	Any land area susceptible to inundation by water from any source by a flood of selected frequency. For purposes of the National Flood Insurance Program, the floodplain, as a minimum, is that area subject to one percent or greater chance of flooding (100–year flood) in any given year.
forest	Vegetation having tree crowns overlapping, generally forming 60 to100 percent cover.
Land Policy	A TVA Board–approved policy that guides retention, disposal, and planning interests in real property
mitigation	An action that either will result in avoidance or an effect or cause the results of an activity to be minor in significance

natural areas	Ecologically significant sites, lands set aside for particular management objectives, and lands that contain sensitive biological, cultural or scenic resources. The TVA natural area program includes small wild areas, habitat protection areas, wildlife observation areas, and ecological study areas.
plan tract	A numbered parcel of TVA fee–owned land that has been assigned, through the reservoir land planning process, an allocation to guide future land use decisions.
prime farmland	Generally regarded as the best land for farming, these areas are flat or gently rolling and are usually susceptible to little or no soil erosion. Prime farmland produces the most food, feed, fiber, forage, and oil seed crops with the least amount of fuel, fertilizer, and labor. It combines favorable soil quality, growing season, and moisture supply and, under careful management, can be farmed continuously and at a high level of productivity without degrading either the environment or the resource base. Prime farmland does not include land already in or committed to urban development, roads, or water storage.
riparian	Related to or located on the banks of a river or stream
scrub–shrub	Woody vegetation less than about 20 feet tall. Species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions
shoreland	The surface of land lying between the minimum pool elevation of a TVA reservoir and the maximum shoreline contour or TVA back–lying property (whichever is further)
shoreline	The line where the water of a TVA reservoir meets the shore when the water level is at the normal summer pool elevation.
shoreline access rights	TVA land encumbered with deeded or implied rights held by adjacent property owners. The deeded or implied rights allow individuals to construct water use facilities upon receipt of TVA's written approval of plans.
threatened species	A species threatened with extinction throughout all or a significant portion of its range or territory. Threatened species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.
wetlands	As defined in TVA Environmental Review Procedures, "Wetlands are those areas inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances do or would support a prevalence of vegetation or aquatic life that requires saturated or seasonably saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, mud flats, and natural ponds.
wildlife management area	Land and/or water areas designated by state wildlife agencies, such as the Tennessee Wildlife Resources Agency, for the protection and management of wildlife. These areas typically have specific hunting and trapping regulations as well as rules regarding appropriate uses of these areas by the public.

INDEX

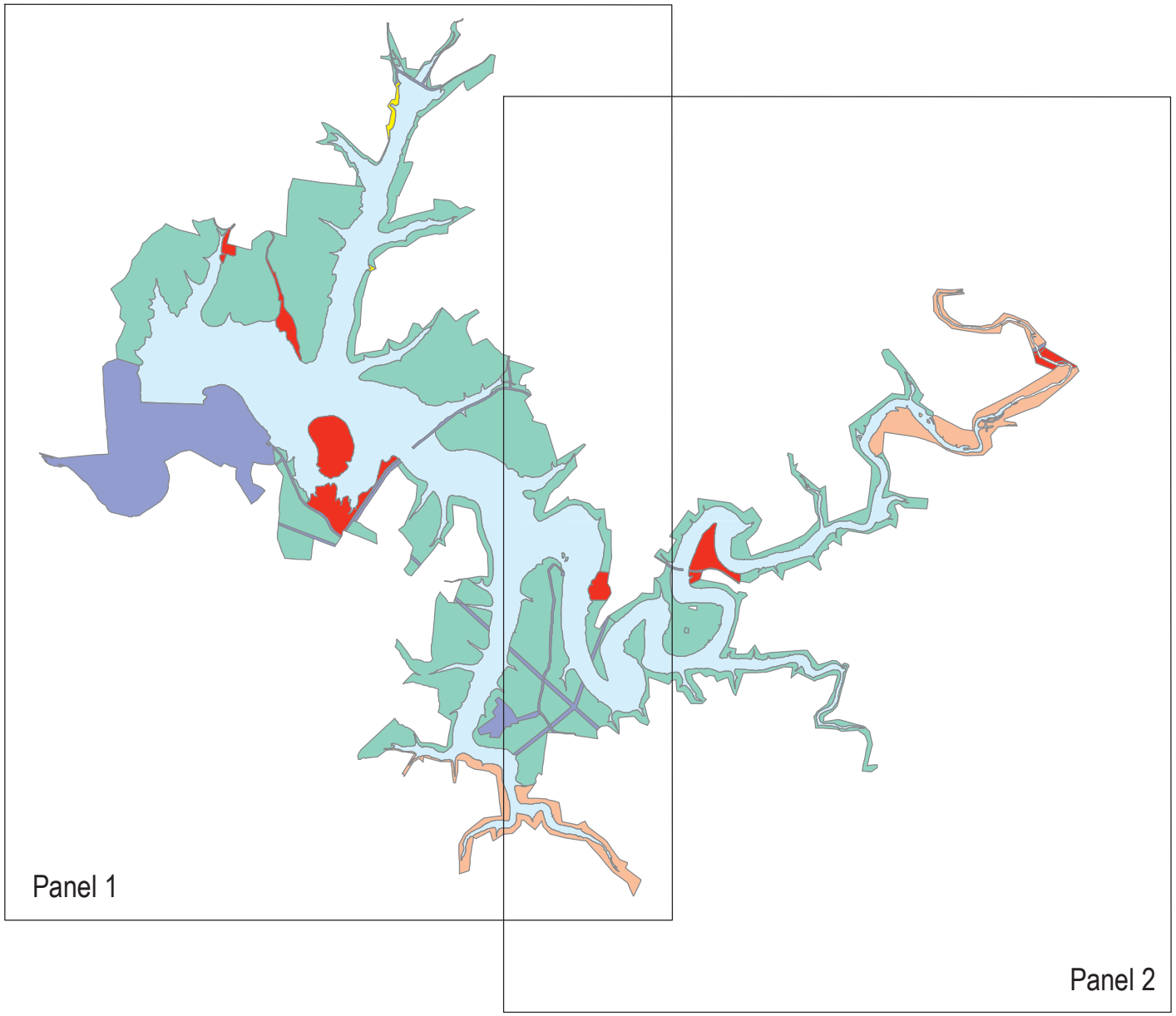
Advisory Council on Historic Preservation 34
Alabama 7, 80
aquatic ecology ..... i, 17, 20
archaeological resource 35, 44
area of potential effect ..... v, 34
back-lying land 52, 54
best management practice 83
Committed land 47
Comprehensive Valleywide Land Plan ..... ii, v, 5, 6, 43, 52, 53
cultural resource 34, 35, 36, 49, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 83
deeded access 54
developed recreation 6, 9, 10, 11, 37, 38, 46, 49, 51, 52, 53, 58, 65, 68, 70, 75
dissolved oxygen 18, 31
ecologically significant site 36, 84
endangered species ..... i, 20, 24, 40, 49, 83, 84
environmental impact statement ..... v, 1, 80
Executive Order ..... v, 15, 39, 79
fish ..... i, ii, v, 7, 17, 18, 19, 20, 21, 29, 30, 41, 50, 55, 56, 80, 81
flood 1, 7, 8, 9, 30, 32, 33, 35, 43, 83
floodplain 9, 33, 83
flowage easement 9, 43
Great Falls 15
industrial 6, 9, 20, 30, 36, 37, 43, 45, 46, 49, 51, 52, 53, 54, 78
Kentucky 7, 13, 17, 80
land use .i, ii, 3, 6, 8, 10, 31, 35, 37, 38, 43, 44, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 76, 77, 84, 91
maximum shoreline contour 84
mitigation 83
mussel 17, 20, 29, 79
National Environmental Policy Act (NEPA) ..... v, 20, 36, 39, 43, 54
National Historic Preservation Act 34, 35, 36
National Park Service 36
National Register of Historic Places ..... v, 34, 36, 44
natural area 36, 44, 45, 46, 49, 84
Normandy ... i, ii, iii, 1, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 25, 27, 28, 29, 30, 31, 32, 33, 35, 36, 37, 38, 39, 40, 41, 42, 43, 48, 49, 50, 51, 52, 53, 55, 56, 59, 62, 79, 80, 91, 92, 93
plant communities 16, 27
prime farmland ..... i, ii, 8, 9, 10, 84
recreation .....i, ii, 5, 7, 8, 10, 11, 12, 30, 32, 41, 42, 44, 45, 46, 47, 49, 51, 53, 54, 55, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 80, 83
Reservoir Land Management Plan .1, ii, v, 1, 5, 6, 8, 9, 10, 11, 12, 15, 20, 24, 27, 28, 30, 31, 32, 33, 34, 36, 37, 40, 43, 47, 48, 49, 50, 51, 52, 53, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76
residential development 8

residential water use facilities 47
scoping 1, 48
Section 106 of the National Historic Preservation Act 34
Section 26a of the TVA Act 9, 43
sensitive resource 6, 9, 11, 38, 40, 42, 44, 45, 47, 48, 49, 51, 52, 53, 54, 67, 69, 73
shoreline access 6, 8, 9, 10, 38, 43, 47, 49, 51, 52, 53, 54, 59, 61, 84
Shoreline Management Initiative ..... v, 3, 8, 32, 43, 80
Shoreline Management Policy ..... i, v, 3, 47, 54
socioeconomics ..... i, 38
speciesii, 13, 14, 15, 16, 17, 18, 19, 20, 21, 24, 25, 27, 28, 29, 30, 32, 41, 44, 45, 55, 59, 71, 73, 79, 80, 83, 84
State Historic Preservation Officer ..... v, 35
Tennessee1, i, ii, v, 1, 2, 7, 8, 9, 10, 11, 15, 16, 17, 21, 22, 24, 27, 28, 29, 30, 36, 37, 38, 39, 40, 41, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 79, 80, 81, 84
Tennessee Valley Authority 1, i, ii, iii, v, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 24, 25, 27, 28, 29, 30, 31, 32, 33, 34, 36, 37, 38, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 80, 81, 83, 84, 91
terrestrial ecology ..... i, 12, 15
threatened ..... i, 20, 24, 40, 44, 49, 84
threatened species 20, 84
TVA Land Policy 54
U.S. Army Corps of Engineers 17, 81
U.S. Environmental Protection Agency 81
U.S. Fish and Wildlife Service 13, 14, 33, 44, 81
uncommitted land 48
visual resource ..... i, 5, 37
wetland ..... i, ii, 13, 14, 26, 31, 32, 33, 44, 49, 51, 59, 81, 83, 84
wildlife ...ii, v, 11, 12, 14, 16, 20, 27, 28, 30, 31, 32, 41, 44, 45, 51, 56, 57, 60, 62, 65, 66, 68, 77, 79, 80, 81, 84

Appendix A – Draft Land Management Plan Maps – Panels 1 and 2

This page intentionally left blank

Normandy Reservoir



Click Panel to View PDF Map

This page intentionally left blank

Appendix B – Comparison of Parcel Allocations by Alternative

This page intentionally left blank

APPENDIX B

Comparison of Parcel Allocations by Alternative

NORMANDY RESERVOIR

Of the 4,797.3 acres on Normandy Reservoir, there are no proposed allocation changes to 3,397.8 acres (70.8 percent); all proposed allocation changes involve 1,399.5 acres (29.2 percent). Of the 1,399.5 acres, TVA would allocate 1,006.3 acres (71.9 percent) to reflect existing land use agreements or commitments. The remaining 393.2 acres (28.1 percent) involve proposed parcel allocations that are not based on existing land use agreements or commitments.

[1]Some parcels are separated into smaller portions to show comprehensive consideration of some parcels. Portions of parcels are in bold text with a footnote.

See Tables below:

Table 1 = No Proposed Allocation Changes;
Table 2 = Changes Based on Existing Agreements or Commitments;
Table 3 = Changes NOT based on Existing Agreements or Commitments

Table 1. No Proposed Allocation Changes			
Number of Parcels Per Zone Allocation			
Zone 2	1	Zone 5	0
Zone 3	3	Zone 6	3
Zone 4	11	Zone 7	1
Parcel	**No Action Allocation**	**Proposed Allocation**	**Acres per Allocation**
1	2	2	641.6
5	6	6	27.7
6	4	4	242.5
7	7	7	9.4
10	4	4	304.5
12	4	4	253.6
13[1]	4	4	179.8
14	6	6	19.8
17[1]	4	4	187.4
18[1]	3	3	175.9
21[1]	3	3	41.9
22	4	4	70.6
24	4	4	186.9
25[1]	4	4	471.1
26	3	3	152.6
27	4	4	26.9
28	4	4	126.8
29	6	6	143.1
30	4	4	135.7
Total = 18 Parcels		**Total = 3,397.8 Acres**	

[1]Denotes a portion of the parcel

Table 2. Changes Based on Existing Agreements or Commitments			
	No Action[1] Parcels	Proposed Allocation Parcels	
Zone 2	0	7	*20.9 Percent of Normandy Lands*
Zone 3	2	0	
Zone 4	7	1	
Zone 5	0	0	9 parcels
Zone 6	0	0	1,006.3 acres
Zone 7	0	1	
Parcel	**No Action Allocation**	**Proposed Allocation**	**Acres per Allocation**
2	4	4	856.1
3	4	2	1.1

8	4	2	10.8
9	4	7	1.0
11	4	2	36.6
15[1]	3	2	9.8
15[1]	4	2	85.4
16	4	2	4.1
20	3	2	1.5
Total = 9 Parcels		**Total = 1,006.3 Acres**	

[1]Denotes a portion of the parcel

Table 3. Changes NOT Based on Existing Agreements or Commitments			
	No Action[2] Parcels	Proposed Allocation Parcels	
Zone 2	0	0	*8.2 Percent of Normandy Lands*
Zone 3	3	2	
Zone 4	2	4	
Zone 5	0	0	9 parcels
Zone 6	0	3	393.2 acres
Zone 7	0	0	
Parcel	**No Action Allocation**	**Proposed Allocation**	**Acres per Allocation**
4	4	6	10.0
13[1]	3	4	56.1
17[1]	Not Planned[2]	4	0.5
18[1]	Not Planned[2]	3	1.1
19	3	6	15.9
21[1]	Not Planned[2]	3	0.2
23	4	6	42.3
25[1]	Not Planned[2]	4	0.7
27	3	4	266.4
Total – 9 Parcels		**Total = 393.2 Acres**	

[1]Denotes a portion of the parcel

[2]There are four parcels “Not Planned”

This page intentionally left blank

TENNESSEE VALLEY AUTHORITY

Multiple Reservoir Land Management Plans

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Volume VIII
Wheeler Reservoir

December 2016

TVA

This page left blank intentionally

Document Type: EIS Administrative Record
Index Field: Draft EIS
Project Name: Multiple RLMPs & CVLP EIS
Project Number: 2016-2

WHEELER RESERVOIR

Draft Reservoir Land Management Plan

VOLUME VIII

MULTIPLE RESERVOIR LAND MANAGEMENT PLANS
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Prepared by
Tennessee Valley Authority

December 2016

This page intentionally left blank

Table of Contents

ACRONYMS AND ABBREVIATIONS ..... VIII-V
CHAPTER 1. INTRODUCTION..... VIII-1
1.1 Tennessee Valley Authority History VIII-1
1.2 Overview of TVA's Mission and Environmental Policy VIII-2
1.2.1 TVA's Mission VIII-2
1.2.2 Environmental Policy VIII-2
1.2.3 Land Policy VIII-3
1.2.4 Shoreline Management Policy VIII-3
1.3 The Natural Resource Plan VIII-5
1.4 Purpose of Reservoir Land Planning VIII-5
CHAPTER 2. REGIONAL OVERVIEW..... VIII-7
2.1 History of Wheeler Dam VIII-7
2.2 Wheeler Reservoir and Present Shoreline VIII-8
2.2.1 Land Use and Prime Farmland VIII-9
2.2.2 Recreation VIII-11
2.2.3 Terrestrial Ecology VIII-14
2.2.4 Aquatic Ecology VIII-19
2.2.5 Threatened and Endangered Species VIII-23
2.2.6 Water Quality VIII-41
2.2.7 Wetlands VIII-42
2.2.8 Floodplains VIII-44
2.2.9 Air Quality VIII-44
2.2.10 Cultural and Historic Resources VIII-45
2.2.11 Natural Areas and Ecologically Significant Sites VIII-48
2.2.12 Aesthetics and Visual Resources VIII-49
2.2.13 Noise VIII-50
2.2.14 Socioeconomics and Environmental Justice VIII-51
2.3 Major Features of Wheeler Reservoir VIII-54
2.3.1 Natural Resource Management VIII-54
2.3.2 Wheeler National Wildlife Refuge VIII-56
2.3.3 Dewatering Units VIII-56
2.3.4 Joe Wheeler State Park VIII-57
2.3.5 Trail of Tears National Historic Trail VIII-57
2.3.6 Cultural Resource Management VIII-58
2.4 The Future Management of Reservoir Lands VIII-58
CHAPTER 3. LAND PLANNING PROCESS..... VIII-59

3.1 Process for Planning Land VIII-59
3.2 Wheeler Reservoir Goals and Objectives VIII-64
3.3 Parcel Allocations VIII-65
3.4 Property Administration VIII-70
CHAPTER 4. PARCEL DESCRIPTIONS VIII-73
CHAPTER 5. PLANNING TEAM VIII-243
CHAPTER 6. LITERATURE CITED VIII-245
GLOSSARY VIII-249
INDEX VIII-251

Appendices

Appendix A – Draft Land Management Plan Maps – Panels 1 through 15 ..... VIII-255
Appendix B – Comparison of Wheeler Parcel Allocations by Alternative VIII-259

List of Tables

Table 2-1. Prime Farmland and Farmland of Statewide Importance on Wheeler Reservoir VIII-11
Table 2-2. Developed Public Recreation Areas on TVA Lands on the Wheeler Reservoir VIII-13
Table 2-3. Developed Commercial, Private and Semi-Private (camps) Recreation Areas on TVA Lands on the Wheeler Reservoir VIII-14
Table 2-4. Land Cover on TVA Owned Parcels and within the Vicinity of Wheeler Reservoir VIII-15
Table 2-5. Invasive Non-native Species that Pose a Severe Threat Known to Occur in Alabama VIII-18
Table 2-6. RFAI and Benthic Community Scores for Wheeler Reservoir (2011-2015) VIII-20
Table 2-7. Fish Species in Wheeler Reservoir VIII-20
Table 2-8. Federally and State-Listed Species in the Wheeler Reservoir Counties VIII-23
Table 2-9. Habitat Requirements for Plant Species of Conservation Concern within 5 Miles of Wheeler Reservoir VIII-31
Table 2-10. Habitat Requirements for Terrestrial Wildlife Species of Conservation Concern within 3 Miles of Wheeler Reservoir VIII-33
Table 2-11. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Wheeler Reservoir VIII-37
Table 2-12. Ecological Health Indicators at Wheeler Reservoir – 2011 ..... VIII-42
Table 2-13. Direct Reservoir Average Daily Water Supply Withdrawals and Wastewater Discharges – 2016 ..... VIII-42
Table 2-14. Wetland Types within the Wheeler Reservoir VIII-44
Table 2-15. Population and Percent Growth – Wheeler Reservoir VIII-52
Table 2-16. Employment and Income, 2010-2014 – Wheeler Reservoir VIII-53
Table 2-17. Minority Population and Poverty, 2010-2014 – Wheeler Reservoir VIII-54

Table 3-1. Land Use Zone Definitions VIII-59
Table 3-2. Summary of Proposed Land Use Allocations for the Draft Wheeler Reservoir Land Management Plan (Alternative B) VIII-65
Table 3-3. Draft Wheeler Reservoir Land Management Plan (Alternative B) and 2011 Comprehensive Valleywide Land Plan Comparison VIII-68

List of Figures

Figure 1-1. TVA Managed Reservoir Land VIII-4
Figure 3-1. Percent of Wheeler Reservoir Acreage Allocated by Zone VIII-66

This page intentionally left blank

ACRONYMS AND ABBREVIATIONS

§	Section
APE	Area of Potential Effect
ADCNR	Alabama Department of Conservation and Natural Resources
ADEM	Alabama Department of Environmental Management
CFR	Code of Federal Regulations
CR	County Road
CVLP	Comprehensive Valleywide Land Plan
dBA	A-Weighted Decibel
EIS	Environmental Impact Statement
EO	Executive Order
HPA	Habitat Protection Area
kV	Kilovolt
MGD	Million Gallons per Day
msl	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NRP	Natural Resource Plan
RFAI	Reservoir Fish Assemblage Index
RLMP	Reservoir Land Management Plan
ROW	Right-of-Way
RVSMP	Reservoir Vital Signs Monitoring Program
SMI	Shoreline Management Initiative
SMP	Shoreline Management Policy
SR	State Route
SWA	Small Wild Area
TL	Transmission Line
TRM	Tennessee River mile
TVA	Tennessee Valley Authority
U.S.	United States
USACE	U.S. Army Corps of Engineers
USCB	U.S. Census Bureau
USDA	U.S. Department of Agriculture
USDOI	U.S. Department of Interior
USFWS	U.S. Fish and Wildlife Service
Valley	Tennessee River Valley Region
WMA	Wildlife Management Area
WNWR	Wheeler National Wildlife Refuge

This page intentionally left blank

CHAPTER 1. INTRODUCTION

The draft Wheeler Reservoir Land Management Plan (RLMP) is a study of the Tennessee Valley Authority (TVA)-managed public land surrounding Wheeler Reservoir. It is one of eight draft RLMPs considered under Alternative B of this Environmental Impact Statement (EIS). The EIS Volume I, contains information on the scoping process, allocation process, alternatives, comparison of the alternatives, and analysis of impacts. In addition, the EIS contains a summary, an index and appendices.

Volume VIII of the EIS addresses TVA's draft RLMP for Wheeler Reservoir. This document provides background information about TVA land management throughout its history and specifically TVA management of public land surrounding Wheeler Reservoir. It explains the purpose of the draft RLMP and describes the process used in its development. The draft RLMP includes the planning process, which lists the objectives around which the RLMP was developed and a summary of the allocation process. The Wheeler Reservoir Regional Overview (Chapter 2) describes the natural and social development of the reservoir and the surrounding area. The Parcel Descriptions (Chapter 4) include total acreage and parcel descriptions documenting proposed land management allocations. The allocation map is included as Appendix A of this RLMP.

Once TVA completes its Multiple RLMP EIS, this Volume will serve as the consolidated planning document addressing management of TVA reservoir lands on Wheeler Reservoir and will be available to TVA staff and the public.

1.1 Tennessee Valley Authority History

President Franklin Roosevelt needed creative solutions to lift the nation out of the depths of the Great Depression, and the TVA is considered one of his most innovative initiatives. Roosevelt envisioned TVA as an agency different from any other. He asked Congress to create "a corporation clothed with the power of government but possessed of the flexibility and initiative of a private enterprise." On May 18, 1933, Congress passed the Tennessee Valley Authority Act (TVA Act). A link to the TVA Act is available at https://www.tva.com/About-TVA/Our-History.

From the start, TVA established a unique problem−solving approach to fulfilling its mission: Integrated Resource Management. Each issue TVA faced—whether it was power production, navigation, flood control, malaria prevention, reforestation, or erosion control—was studied in its

broadest context. TVA weighed each issue relative to the others. From this beginning, TVA has held fast to its strategy of integrated solutions, even as the issues changed over the years. A short TVA history and a link to the TVA Act is available at http://www.tva.com/abouttva/history.htm.

1.2 Overview of TVA's Mission and Environmental Policy

1.2.1 TVA's Mission

TVA has a rich history of improving quality of life and economic prosperity for people and businesses in the TVA service area. TVA was created by Congress in 1933 and charged with a unique mission—to improve the quality of life in the Valley through the integrated management of the region's resources. For more than eight decades, we have worked tirelessly to carry out that mission, and we are working just as hard to make life better for the nine million people who live in the Valley today. We serve the people of the Tennessee Valley by focusing on three key areas: energy, environment, and economic development.

1.2.2 Environmental Policy

As stated in TVA's 2007 Strategic Plan, "TVA will be proactive in addressing environmental concerns, including those related to global climate change." About half of the identified strategic objectives and critical success factors in the plan relate directly to TVA's environmental activities and policy making.

Following the release of the 2007 Strategic Plan, the TVA Board asked for the development of an integrated environmental policy to outline objectives and critical success factors across the multiple areas of TVA's activities. In 2008, the TVA Board approved the Environmental Policy, which provides guiding principles for reducing the environmental impacts of TVA operations while continuing to provide reliable and affordable power to the Valley. In 2010, a biennial review of the Environmental Policy was completed, which did not result in major changes or revisions. TVA's overarching Environmental Policy objective is to provide cleaner, reliable, and affordable energy; support sustainable economic growth in the Valley; and engage in proactive environmental stewardship in a balanced and ecologically sound manner. A copy of the Environmental Policy is available at http://www.tva.com/environment/policy.htm.

1.2.3 Land Policy

On behalf of the United States (U.S.), TVA originally acquired approximately 1.3 million acres of land in the Valley. Creation of the TVA reservoir system inundated approximately 470,000 acres with water. TVA has transferred or sold approximately 508,000 acres, the majority of which was transferred to other federal and state agencies for public uses. TVA currently controls approximately 293,000 acres of reservoir lands, which continue to be managed pursuant to the TVA Act (Figure 1-1). As part of its management of these lands, TVA allocates them to various land use zones (see Section 3.1). These TVA-managed lands are frequently referred to as "TVA lands" in this document.

In 2006, TVA adopted a Land Policy to guide retention, disposal, and planning of real property. Accordingly, it is TVA's policy to manage its lands to protect the integrated operation of the TVA reservoir and power systems, to provide for appropriate public use and enjoyment of the reservoir system, and to provide for continuing economic growth in the Valley. Recognizing that historical land transfers have contributed substantially to meeting multipurpose objectives, TVA maintains the policy of retaining in public ownership the reservoir lands under its control except in those rare instances where the benefits to the public will be so significant that transferring lands to private ownership or another public entity is justified. The Land Policy is available at https://www.tva.gov/Environment/Environmental-Stewardship/Land-Management/TVA-Land-Policy

1.2.4 Shoreline Management Policy

In November 1998, TVA completed a Shoreline Management Initiative (SMI) EIS (TVA 1999) analyzing possible alternatives for managing residential shoreline development throughout the Valley. In April 1999, TVA adopted the agency's current Shoreline Management Policy (SMP), which incorporates a strategy of managing public shoreline through an integrated approach that conserves, protects, and enhances shoreline resources and public use opportunities while providing for reasonable and compatible use of the shoreline by adjacent residents. The SMP defines the standards for vegetation management, docks, shoreline stabilization, and other residential shoreline alterations. The SMI EIS is available at https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy

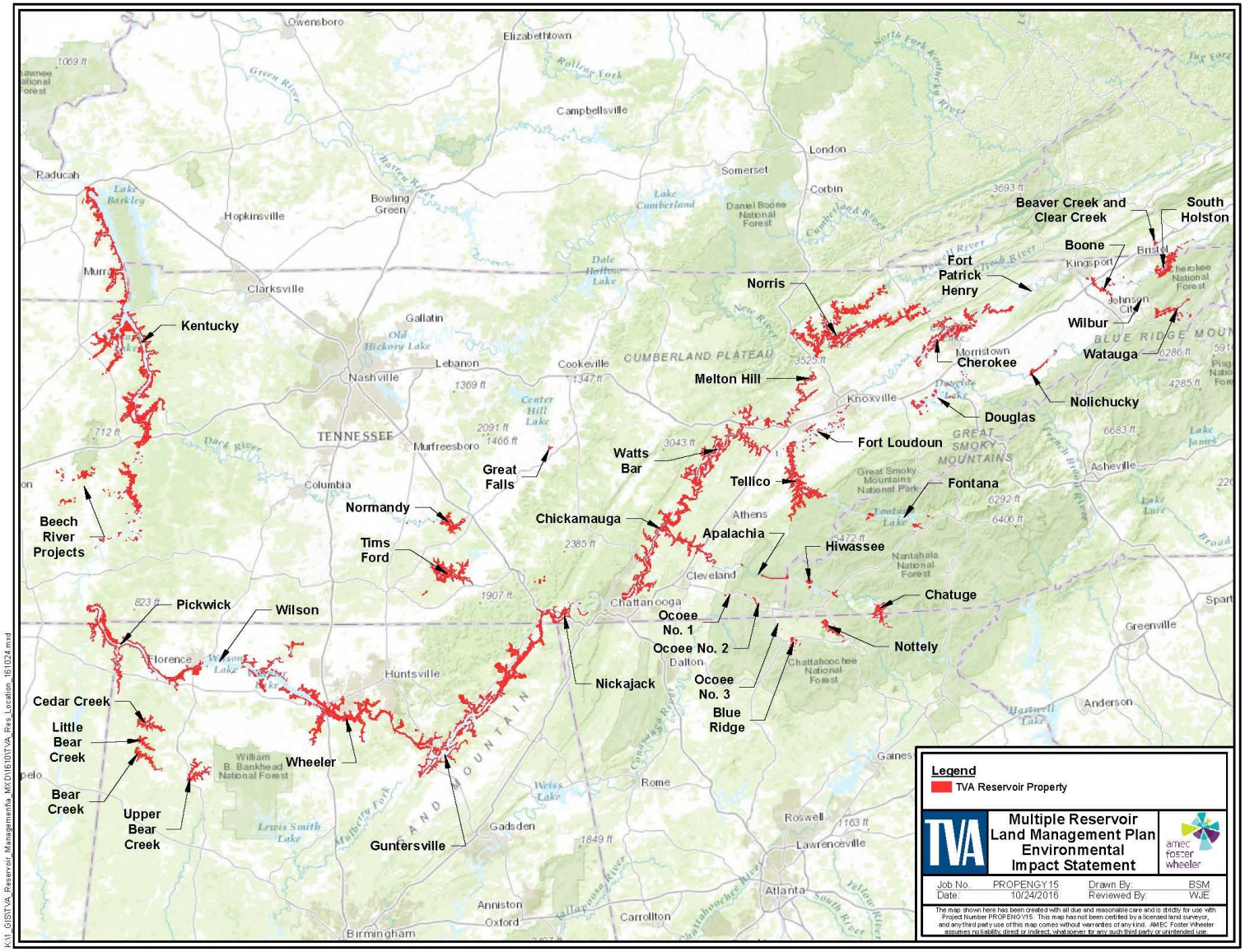


Figure 1-1. TVA Managed Reservoir Land

1.3 The Natural Resource Plan

In 2011, TVA completed a Natural Resource Plan (NRP) (TVA 2011) that strategically guides the management of both renewable and nonrenewable resources, underscoring the importance of protecting those resources that will be lost forever if they are not actively protected or improved today. TVA is one piece of the solution and recognizes the need for a coordinated and collaborative effort to meet the near− and long−term resource needs. As such, the NRP is designed to:

- Integrate the objectives of six resource areas (biological, cultural, recreation, water, public engagement, and reservoir lands planning)
- Provide optimum public use benefit
- Balance competing and sometimes conflicting resource uses

These competing interests, coupled with today's environmental awareness and focus on preserving nonrenewable resources, underscore the necessity for a consistent approach to the management of TVA lands. The NRP represents TVA's high-level strategy for managing its natural resources in the near and long term. Detailed implementation plans, such as this draft RLMP, are being developed based on the NRP to drive specific implementation efforts. The NRP is available at https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan

1.4 Purpose of Reservoir Land Planning

As a regional development agency and the nation's largest public power provider, TVA is committed to protecting and sustaining the environmental resources of the Valley for future generations through leadership in clean energy innovation and environmental management. In managing its public lands and resources, TVA seeks to provide efficient resource stewardship that is responsive to stakeholder interests.

TVA intends to manage its public land for an optimum level of multiple uses and benefits that protect and enhance natural, cultural, recreational, and visual resources in a cost-effective manner. Through this approach, TVA ensures that resource stewardship issues and stakeholder interests are considered while optimizing benefits and minimizing conflicts.

As part of the NRP, TVA developed a Comprehensive Valleywide Land Plan (CVLP). The CVLP guides resource management and administration decisions on the approximately 293,000 acres of TVA lands around 46 reservoirs. It identifies the most suitable uses for the land under TVA's control, identifying areas for project operations, sensitive resource management, natural resource conservation, industrial/commercial development, developed recreation, and shoreline access. The objectives of the CVLP are designed to implement TVA's mission of serving the Valley through energy, environment, and economic development. Under the CVLP, TVA will develop and update RLMPs, such as this plan, for a portion of a reservoir, an entire reservoir, or a group of reservoirs. RLMPs are consistent with TVA's policies and programs discussed within this chapter.

The CVLP will be recalibrated as needed (as described under Alternative B in Volume I of this EIS, TVA proposes to update the target ranges of the CVLP to incorporate the findings of the eight proposed RLMPs). The CVLP was based, in part, on the anticipation that some parcels of land may be better allocated to different land use zones from those initially identified. For example, field assessments may identify additional areas that warrant the sensitive resource management allocation. In addition, during the creation or update of each individual RLMP, TVA may determine, either for its own management purposes or as a result of public input, that certain parcels of land should be used differently from how they have been used in the past. The preliminary results of the Wheeler Reservoir planning effort have been included in determining the potential revisions to the CVLP. The draft Wheeler RLMP and proposed revisions to the CVLP will be included in the five-year cyclic review of the NRP. The next cyclic review of the NRP is slated for 2017.

CHAPTER 2. REGIONAL OVERVIEW

2.1 History of Wheeler Dam

The headwaters of the Tennessee River are in eastern Tennessee, in southwestern Virginia, western North Carolina, and in northern Georgia. The Tennessee River is formed by the confluence of the Holston and French Broad rivers just above Knoxville, Tennessee. The river flows in a southwesterly direction through Tennessee, crosses northern Alabama, forms a small portion of the northeastern boundary of Mississippi, and then flows north through western Tennessee and western Kentucky to empty into the Ohio River at Paducah, Kentucky, a distance of about 650 miles. The Tennessee River drains an area of 40,910 square miles, about equal to the area of Ohio. The headwaters are in the Great Smoky Mountains and the Blue Ridge Mountains, which are the highest ranges east of the Rockies. The mountain region is in striking contrast to the relatively flat lands of northern Alabama and to the rolling land of western Kentucky.

The series of rapids between the cities of Decatur and Florence, Alabama, through which the Tennessee River falls 134 feet in 37 miles, created a formidable obstacle to transportation during the early period of settlement when water routes constituted almost the only avenue of penetration into the wilderness west of the Alleghenies. The 16-mile reach at the downstream end of these rapids, where the river falls 100 feet, is the famous Muscle Shoals. The obvious desirability of continuous navigation along the river resulted in many plans and suggestions for improvement and with the advent of organized government in the territory, two attempts were made to construct canals and locks to bypass the shoals. These canals, although eventually constructed and used, were inadequate, expensive to maintain and operate, and of little lasting benefit.

The growing utilization of hydroelectric power introduced a possible solution to the navigation problem by making possible a multi-purpose, income-producing development. Starting in 1898, legislation was introduced by the U.S. Government concerning the navigation of the Tennessee River and the disposition and development of the area between Decatur and Florence, Alabama. Specifically, the Rivers and Harbors Act, approved by Congress on July 3, 1930, allowed for the permanent improvement of the main stream of the Tennessee River for a navigable depth of 9 feet.

The Emergency Relief and Construction Act of July 21, 1932, appropriated $30 million for previously authorized river and harbor projects. Construction began on the Wheeler Dam and lock in November 1932, under the provisions of this act. Initially, the lock was to be a single 37-foot lift structure. This lock, with the construction of a dam of corresponding height, would have established the reservoir level at elevation 542-foot mean sea level (msl) and would extend the 9-foot navigation approximately 45 miles upstream without additional channel improvement.

Soon after the creation of TVA, the Board arranged with the U.S. Army Corps of Engineers (USACE) for changing the Wheeler lock then under construction to allow more adequate development of this section of the river. TVA's studies indicated the advisability of raising the dam above the height planned by the USACE to provide a longer navigation pool, increased flood storage space in the reservoir, and additional power facilities. The final design of the dam provided for a maximum controlled pool level at elevation 556.3-feet msl, approximately 12 feet higher than the elevation planned by the USACE.

Wheeler Dam was named for General Joe Wheeler whose home, at Wheeler, Alabama, about 17 miles from the dam site, for years has been one of the principle points of interest in that part of the state. General Joe Wheeler, a member of the U.S. Congress, from Alabama, in 1898 introduced a bill providing for the development of Muscle Shoals as a power-navigation project by the Muscle Shoals Power Company. The proposed project contemplated the construction of canals and power plants in the Shoals. Although no construction was undertaken, the bill was the first of the series, which ultimately led to the passage of the TVA Act in 1933.

2.2 Wheeler Reservoir and Present Shoreline

Construction of Wheeler Dam began in late 1932 and was completed in 1936. It was the second dam TVA built, finished only seven months after Norris. Located at Tennessee River mile (TRM) 274.9, Wheeler Dam is 72 feet high and stretches 6,342 feet across the Tennessee River in Lauderdale and Lawrence counties in Alabama. The dam is 15.5 miles above Wilson Dam; 29.5 miles below Decatur, Alabama; 50 miles west of Huntsville, Alabama; and 95 miles north of Birmingham, Alabama.

The reservoir has a volume of 1,050,000 acre-feet at elevation 556.0 feet msl (summer pool) and a flood storage capacity of 326,500 acre-feet between top-of-gates (elevation 556.28) and elevation 551 msl. To maintain the water depth required for navigation, the minimum winter

elevation for the reservoir is 550.5-feet msl, and the typical summer operating range is between 555- and 556-feet msl. Wheeler Dam has two locks, one 110 feet wide by 600 feet long and the other is 60 feet wide by 360 feet long. They lift and lower barges as much as 52 feet between Wheeler and Wilson reservoirs.

The Tennessee River drainage area at Wheeler Dam is approximately 29,590 square miles. The reservoir property is situated in Lauderdale, Lawrence, Limestone, Madison, Marshall, and Morgan counties in Alabama.

The Wheeler Reservoir has 1,063 miles of shoreline and a total surface area of approximately 67,070 acres. To create this reservoir, it was necessary to acquire approximately 103,897 acres of land and land rights for flooding, erosion control, and other purposes; clear over 31,200 acres; move 840 families and 176 graves; relocate or protect highways, railroads, and utility lines, and provides adjustments for other backwater damages.

The land was acquired by unencumbered fee purchases except where there were outstanding mineral rights in properties lying above the flood level of the reservoir and where it was found more desirable to purchase easements. No attempt was made to acquire such mineral interests; this resulted in lower acquisition costs and avoided the reduction of possible mineral development in the area. The greater part of the land acquired for the reservoir had been used for agriculture, corn and hay having been grown on the bottom fields and cotton on the uplands. Flowage rights for backwater adjustments were acquired in the Dry Creek area and along the Decatur waterfront.

2.2.1 Land Use and Prime Farmland

TVA originally acquired approximately 103,070 acres of land in fee and approximately 827 acres of easements for Wheeler Reservoir. TVA sold or transferred approximately 26,332 acres of land from the original acquisition. Approximately 43,938 acres are inundated or flood prone. The remaining approximate 32,801 acres along with approximately 3,244 acres of flood prone areas supporting dewatering units (totaling approximately 36,045 acres) are the scope of this RLMP. The shoreline of Wheeler Reservoir is primarily composed of forested areas, with agricultural, residential, and recreational development. These uses are generally reflected in the land cover database for the parcels around the reservoir and the surrounding area which identifies land cover in these areas as primarily forested and farmed areas with a relatively large amount of developed land. Most of the developed land is classified as developed open space and low

intensity development located within the vicinity of the reservoir. Developed open space includes single family housing units on large lots, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes. Land cover classified as developed, low intensity includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for less than 50 percent of the total land cover.

According to TVA's 1998 SMI EIS, TVA owns approximately 1,016 miles of the 1,027 mile shoreline (99 percent) on Wheeler Reservoir (see Volume I, Table 3-1). Less than 1 percent (approximately 11 miles) of the shoreline miles on this reservoir is privately owned and is available for residential shoreline development (see Volume I, Table 3-2).In the SMI EIS, TVA estimates that approximately 54 percent of this privately owned shoreline is currently developed with residential subdivisions. TVA has holds flowage easement rights along portions of this private shoreline.

As identified in above, TVA originally purchased approximately 103,070 acres of land in fee and approximately 827 acres of easements for Wheeler Reservoir. Some of this land had been sold or transferred, however, any structures proposed within existing flowage easements or within the 500-year floodplain are subject to Section 26a of the TVA Act. Section 26a of the TVA Act requires that TVA's approval be obtained prior to the construction, operation, or maintenance of any dam, appurtenant works, or other obstruction affecting navigation, flood control, or public lands or reservations along or in the Tennessee River or any of its tributaries.

TVA owned land on the Wheeler Reservoir contains 14,381.3 acres of identified prime farmland and 8,938.8 acres of farmland of statewide importance (Table 2-1). Prime farmland has soil with the best combination of physical and chemical characteristics for producing food and fiber and is protected from conversion to industrial and nonagricultural uses by the United States Department of Agriculture (USDA). It is noted, however, that current soil mapping of prime farmland soils does not account for existing developed uses that may have previously disturbed and potentially converted prime farmland.

Table 2-1. Prime Farmland and Farmland of Statewide Importance on Wheeler Reservoir

Proposed Zone (Draft RLMP)	Prime Farmland (acres)	Farmland of Statewide Importance (acres)
Zone 2 - Project Operations	1,656.7	520.6
Zone 3 - Sensitive Resource Management	1,429.8	852.9
Zone 4 - Natural Resource Conservation	10,355.2	6,945.7
Zone 5 - Industrial	279.8	362.7
Zone 6 - Developed Recreation	640.3	243.7
Zone 7 - Shoreline Access	19.4	23.3
Total	**14,381.3**	**8,948.8**

Source: USDA Natural Resources Conservation Service 2016a

The majority (10,355.2 acres and 6,945.7 acres, respectively) of both prime farmland and farmland of statewide importance acreage occurs in areas that would be allocated to Zone 4, which would have little or no soil disturbance. Major soil disturbance could occur when TVA or other public facilities are constructed in lands designated for Zone 2, which would include 1,656.7 acres of prime farmland and 520.6 acres of farmland of statewide importance. However, most parcels that TVA proposes to allocate for Zone 2 already contain facilities that are not likely to require substantial modification. Only 640.3 acres of prime farmland and 243.7 acres of farmland of statewide importance would occur in Zone 6, where major soil disturbances could occur in specific locations, if recreation facilities are constructed. Conversely, large areas could remain unaffected for more dispersed recreation management. The least amount of prime farmland (19.4 acres) and farmland of statewide importance (23.3 acres) would occur in Zone 7.

For more information on land use and prime farmland resources and the potential impacts of the draft RLMP, see Volume I, Sections 3.2 and 3.3.

2.2.2 Recreation

TVA provides public lands for developed and dispersed recreational purposes through the reservoir lands planning process. Developed recreation include campgrounds, lodges, marinas, boat ramps, parks, swimming pools, beaches and day use facilities. Dispersed recreation activities include picnicking, primitive camping, hiking, bank fishing, hunting, kayaking and canoeing. In 2005, TVA developed a recreation strategic plan aimed at collaboratively enhancing recreational opportunities and addressing unmet recreational needs while managing the resources of the Tennessee River system (TVA 2005). This strategy laid out guiding principles for how to best design and develop recreation opportunities. During this reservoir

lands planning effort, tracts of TVA-managed lands around Wheeler Reservoir were categorized based upon a suitable use that is consistent with TVA policy and guidelines and applicable laws and regulations.

On Wheeler Reservoir, developed recreation provides modern facilities and amenities such as campgrounds, developed boat launches/ramps, parks and a myriad of day use facilities (picnic areas, swimming beaches, and fishing piers). These uses primarily occur on TVA lands allocated to Zone 6 (Developed Recreation) and Zone 2 (Project Operations). Under the draft RLMP (Alternative B), approximately 4 percent (1,312.1 acres) of TVA land would be allocated under the draft RLMP to Zone 6 and approximately 13 percent (4,813.5 acres) would be allocated to Zone 2.

Wheeler Reservoir is an outdoor recreation resource that attracts visitors from within and outside the region. Twenty-five parcels contain developed recreation areas on the Wheeler Reservoir including public parks, commercial recreation operations and semi-private clubs. Many of these recreation areas are located on properties that TVA transferred, leased or licensed for recreation development and use. Public parks developed on lands made available by TVA include Joe Wheeler State Park, Point Mallard Park and Round Island Creek Recreation Area.

In 1952, TVA transferred approximately 930 acres to the state of Alabama to assist in the establishment of Joe Wheeler State Park. The park currently spans across both banks of the Tennessee River and includes large portions of First Creek and Second Creek and property along Elk River. Joe Wheeler State Park continues to be a recreational attraction in northwest Alabama with amenities including a resort lodge, lakeside cottages, cabins, group lodge, camping, and a restaurant. The park is part of the Alabama Bass Trail and offers additional recreation activities such as a beach, boat rentals, golf course, marina, picnic area, trails, and transient boat slips.

Other public agencies maintain boat ramps (State of Alabama and Limestone County) at strategic locations around the reservoir. Commercial recreation operations include the Ditto Landing Marina and Jay Landing Marina.

Table 2-2 itemizes developed recreation area lands that are managed by TVA or another public agency for recreation purposes. Table 2-3 summarizes commercial, private, and semi-private developed recreation areas. Tables 2-2 and 2-3 do not itemize recreation areas on non-TVA

shorelands (Zone 1) because these areas are beyond the scope of this draft RLMP. Wheeler Reservoir parcel descriptions (see Chapter 4) further describe the management entity and management descriptions of recreation facilities on lands managed by either TVA or under contractual agreement.

Table 2-2. Developed Public Recreation Areas on TVA Lands on the Wheeler Reservoir

Recreation Area	Managing Entity	Parcel Location
Wheeler Dam Reservation	TVA	1
Campground	Lauderdale County	2
Joe Wheeler State Park	State of Alabama	3
Boat Ramp	TVA	9
Barnett's Landing	Alabama Department of Conservation and Natural Resources (ADCNR)	14
Boat Ramp	State of Alabama	22
Boat Ramp	State of Alabama	40
Boat Ramp	TVA	48
Boat Ramp	Limestone County	49
Boat Ramp	State of Alabama	55
Boat Ramp, Fishing Pier, Campground	Limestone County	63
Round Island Creek Recreation Area	Limestone County	74
Triana Boat Ramp	State of Alabama	94
Ditto Landing Marina	Huntsville –Madison County	99
Boat Ramp	State of Alabama	157
Point Mallard Park	City of Decatur	171
Trails	City of Decatur	176
Pines Park	City of Decatur	181
Boat Ramp	TVA	195
Joe Wheeler State Park	State of Alabama	206
Joe Wheeler State Park	State of Alabama	207

Table 2-3. Developed Commercial, Private and Semi-Private (camps) Recreation Areas on TVA Lands on the Wheeler Reservoir

Recreation Area	Managing Entity	Parcel Location
Boat Ramp	Girl Scouts of America	16
Riverwalk Yacht Club	Private	173
Jay Landings Marina	Commercial	178
Mallard Creek Campground	Commercial	188

Some of the TVA lands around Wheeler Reservoir provide excellent opportunities for dispersed or nature-based recreation activities. Dispersed recreation would occur on lands allocated to Zone 2 (Project Operations) and undeveloped areas allocated Zone 6 (Developed Recreation) as well as on land that would allocated to Zone 3 (Sensitive Resource Management) (and Zone 4 (Natural Resource Conservation). For example, on lands allocated to Zone 4 (Natural Resource Conservation) dispersed recreation activities include hunting, wildlife observation, fishing and camping on undeveloped sites.

For more information on recreation resources and the potential impacts of the draft RLMP, see Volume I, Section 3.4.

2.2.3 Terrestrial Ecology

Wheeler Reservoir lies within the Interior Plateau and Southwestern Appalachians ecoregions (U.S. Environmental Protection Agency 2013). The Interior Plateau ecoregion is a series of grassland plateaus and forested uplands that are generally lower in elevation than the Appalachian Mountains to the east but higher than the plains to the south. The Southwestern Appalachians ecoregion consists of open low mountains, with some areas containing steep slopes. Approximately three-fourths of the ecoregion is covered by forest, primarily mixed oak communities and shortleaf pines. Agricultural lands are found on lower slopes and valley floors. The variety of landforms, soils, climate, and geology across these ecoregions have allowed for an extremely diverse assemblage of animals, including migratory birds of conservation concern. Deciduous forests and mixed evergreen-deciduous forests provide wildlife habitat among the agriculture and more urbanized areas (USGS 2016). Table 2-4 contains a summary of the land cover within and in the vicinity of Wheeler Reservoir.

Table 2-4. Land Cover on TVA Owned Parcels and within the Vicinity of Wheeler Reservoir

Land Cover Type	TVA Property		Vicinity (5-Mile Radius)	
	Acres[1]	Percent Cover (%)	Acres[1]	Percent Cover (%)
Barren Land	116.3	0.3	1,061.5	0.1
Developed				
Developed, High Intensity	18.9	0.1	4,262.0	0.4
Developed, Medium Intensity	117.0	0.3	12,550.5	1.3
Developed, Low Intensity	174.0	0.5	31,425.3	3.3
Developed, Open Space	837.9	2.3	60,830.8	6.4
Forest				
Deciduous Forest	7,943.1	22.0	208,353.1	22.0
Evergreen Forest	3,242.4	9.0	37,259.0	3.9
Mixed Forest	1,500.2	4.2	33,896.5	3.6
Shrubland				
Shrub/Scrub	1,699.1	4.7	46,389.5	4.9
Herbaceous				
Grassland/Herbaceous	535.75	1.5	20,388.3	2.2
Hay/Pasture	1,801.2	5.0	236,327.5	24.9
Planted/Cultivated				
Cultivated Crops	2,526.36	7.0	126,665.6	13.4
Wetlands/Open Water				
Woody Wetlands	11,559.3	32.1	54,347.2	5.7
Emergent Herbaceous Wetlands	208.2	0.6	1,327.2	0.1
Open Water	3,765.42	10.4	73,055.1	7.7
Total	**36,045.2**	**100**	**948,139.0**	**100**

[1] Source: Homer et al. 2015

Oak-hickory deciduous forest is the most abundant forest type in the eastern U.S. and is prevalent in the Wheeler Reservoir region. Some mixed deciduous-evergreen and evergreen forests are also present in this region. Numerous bird species nest in deciduous forests. Typical species include wild turkey, whip-poor-will, ruby-throated hummingbird, red-eyed vireo, black-throated green warbler, black-and-white warbler, ovenbird, hooded warbler, and the scarlet tanager. Several additional migratory bird species of concern utilize these habitats in part or all of the region, including chuck-will's widow, Kentucky warbler, red-headed woodpecker, wood thrush and worm-eating warbler (U.S. Fish and Wildlife Service [USFWS] 2016a). Common mammal species of deciduous forests include white-tailed deer, red bat, eastern chipmunk,

eastern gray squirrel and southern flying squirrel, white-footed mouse, cotton deermouse, short-tailed shrew, gray fox, and bobcat.

Deciduous forests and mixed evergreen-deciduous forests account for 26 percent of the land cover within the Wheeler Reservoir parcels (see Table 2-4). Evergreen forests make up an additional nine percent of the land cover. Seeps, streams, and temporary ponds in deciduous forests provide habitat for numerous amphibians including American and Fowler's toads, green frog, northern cricket frog, and other frogs, and a range of salamanders including spotted and mole salamanders. Reptiles commonly found in deciduous forests especially near water include eastern fence lizard, ground skink, five-lined skink, eastern box turtle, eastern wormsnake, black racer, and ring-necked snake. The riparian zones along streams within deciduous forests provide nesting habitat for Acadian flycatchers, northern parula, and species of conservation concern such as bald eagle, least bittern, Louisiana waterthrush, and prothonotary warbler (USFWS2016a).

Evergreen and mixed evergreen-deciduous forests provide nesting for woodland birds including pine and yellow-throated warblers, and great crested flycatcher. Several additional migratory bird species of concern utilize these habitats including brown-headed nuthatch, chuck-will's widow, Kentucky warbler, fox sparrow, prairie warbler, and red crossbill (USFWS 2016a). Portions of this forest type have been damaged by southern pine beetles in recent years. Several stands of dead pines exist on TVA lands, and TVA has performed salvage harvests in some stands. Dead and dying pines provide foraging sites for woodpeckers and roosting sites for and silver-haired bats. Other animals that inhabit evergreen and evergreen-deciduous forests but are not restricted to them include white-tailed deer, wild turkey, eastern mole, eastern kingsnake, smooth earth snake, eastern fence lizard, six-lined racerunner, and a variety of salamanders, frogs, and toads, especially near wet areas.

Nonforested herbaceous community types in the Wheeler Reservoir region are dominated by pasturelands and hayfields. Herbaceous habitats, including grasslands, barrens, hayfields, and pastures account for approximately 7 percent of the landcover on the reservoir parcels (see Table 2-3). Early successional habitats provide habitat for a variety of bird species including eastern bluebird, eastern meadowlark, American crow, and red-tailed hawk. Several additional migratory bird species of concern utilize these habitats in this area including dickcissel, sedge wren, and short-eared owl (USFWS2016a). Amphibians and reptiles that use these habitats include spring peeper, chorus frog, and common garter snake.

Bird and mammal diversity greatly increases at edge habitats especially those between forested areas bordered by early successional habitats. Birds commonly found at these edge habitats include wild turkey, great crested flycatcher, white-eyed vireo, Carolina wren, blue-gray gnatcatcher, brown thrasher, common yellowthroat, yellow-breasted chat, indigo bunting, eastern towhee, field and song sparrow, and orchard oriole. Several additional migratory bird species of concern utilize these habitats in this area including Bachman's sparrow, blue-winged warbler, dickcissel, loggerhead shrike, and red-headed woodpecker (USFWS 2016a). Mammals typically inhabiting edges include eastern cottontail, eastern harvest mouse, red fox, coyote, and striped skunk.

The reservoir parcels provide wetlands, including wooded swamps and open water habitats and associated riparian zones that are used by a variety of wildlife. Approximately 43 percent of the TVA parcels contain wetland and open water habitats. Common species include great blue heron, green heron, belted kingfisher, common yellowthroat, and northern parula. Many additional migratory bird species of concern utilize these habitats in this area including American bittern, bald eagle, least bittern, Louisiana waterthrush, prothonotary warbler, rusty blackbird, sedge wren, and short-eared owl (USFWS 2016a). Two colonial nesting bird colonies/heronries have been observed on TVA parcels (TVA 2016b). Shallow embayments, especially those with emergent vegetation, provide foraging habitat for waterfowl. Common waterfowl include wood ducks, Canada geese, and mallards. Other waterfowl periodically present include American black duck, gadwall, green-winged teal, ring-necked duck, lesser scaup, common goldeneye, bufflehead, hooded merganser, and common merganser.

Shorebird use of the Wheeler Reservoir is limited to shallow embayments and exposed mud flats. Species such as spotted sandpiper that forage along the margins of reservoirs and killdeer that are not restricted to foraging on mud flats are commonly observed. Common amphibians found in the riparian zones include green frog, eastern narrowmouth toad, and Fowler's toad. Reptiles include northern water snake, common snapping turtle, and painted turtles. Common mammals include mink, muskrat, raccoon, and American beaver.

A search of the TVA Natural Heritage database in May 2016 indicated that 253 caves are located within 3 miles of Wheeler Reservoir. Seven caves are located on TVA parcels (TVA 2016b).

For information on terrestrial ecology and potential impacts of the draft RLMP, see Volume I, Section 3.5.

2.2.3.1 Invasive Nonnative Species

Many of the planned TVA parcels around Wheeler Reservoir contain a substantial amount of invasive nonnative species. Executive Order (EO) 13112 defines an invasive nonnative species as any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem; and whose introduction does or is likely to cause economic or environmental harm or harm to human health.

The Southeastern Exotic Plant Pest Council provides a list of nonnative invasive species that could pose potential threats to native ecosystems and human health for each southeastern state. In reviewing the Alabama exotic plant pest list (Alabama Invasive Plant Pest Council 2012), there were 19 species occurring in Alabama that pose a severe threat to native ecosystems observed in the Wheeler Reservoir region (Table 2-5).

Table 2-5. Invasive Non-native Species that Pose a Severe Threat Known to Occur in Alabama

Common Name	Scientific Name
Alligatorweed	*Alternanthera philoxeroides*
Aquarium water-moss	*Salvinia molesta*
Chinese privet	*Ligustrum sinense*
Chinese wisteria	*Wisteria sinensis*
Cogongrass	*Imperata cylindrica*
Common water hyacinth	*Eichhornia crassipes*
English ivy	*Hedera helix*
Eurasian water milfoil	*Myriophyllum spicatum*
Hydrilla	*Hydrilla verticillata*
Japanese climbing fern	*Lygodium japonicum*
Japanese honeysuckle	*Lonicera japonica*
Japanese stiltgrass	*Microstegium vimineum*
Kudzu	*Pueraria montana* var. *lobata*
Mimosa	*Albizia julibrissin*
Multiflora rose	*Rosa multiflora*
Parrot feather watermilfoil	*Myriophyllum aquaticum*
Sericia lespedeza	*Lespedeza cuneata*
Tallowtree	*Triadica sebifera*
Water lettuce	*Pistia stratiotes*

Source: Alabama Invasive Plant Pest Council 2012

All of these species have the potential to adversely impact the native plant communities because of their potential to spread rapidly and displace native vegetation. TVA considers all of these species a severe threat to local plant communities.

In addition to invasive or non-native plant species discussed above, there are several exotic, non-native, and/or pest insect species and plant diseases that are known to occur within the counties encompassing Wheeler Reservoir. These insects and diseases can have devastating impacts on native plant communities and human crops/fruits. The insects include: Japanese beetle, (*Popillia japonica*), brown marmorated stink bug (*Halyomorpha halys*), kudzu bug (*Megacopta cribraria*), southern pine beetle (*Dendroctonus frontalis*), and sugarcane aphid (*Melanaphis sacchari*) (EDDMapS 2016). These species all have the potential to pose problems to native vegetation, wildlife, crops, landscaping and gardens, and/or overall ecosystems due to the lack of natural predators or diseases to help control their populations giving them the ability to out-compete native species.

The following plant diseases are also known to occur in the counties containing Wheeler Reservoir: butternut canker (*Sirococcus clavigignenti-juglandacearum*), dogwood anthracnose (*Discula destructive*), fusiform rust (*Cronartium quercuum* f.sp. *fusiforme*), and Heterobasidion root rots (*Heterobasidion* spp.). Many of these diseases target certain plant species or groups of species and can have serious impacts to local populations of those plants and trees.

There are several exotic, non-native, and/or pest terrestrial wildlife and other insect species that are known to occur within the region. These include: Asian tiger mosquito (*Aedes albopictus*), cat (feral) (*Felis catus*), and European starling (*Sturnus vulgaris*) (EDDMapS 2016). These species have the potential to pose problems to native wildlife and ecosystems due to their ability to out-compete native species and spread quickly. Some of these species can pose threats to human health and safety. Asian tiger mosquitoes are known to transmit various diseases to humans.

2.2.4 Aquatic Ecology

Aquatic ecological conditions in streams and reservoirs are monitored under a number of TVA programs. Aquatic ecological conditions in the larger reservoirs have been monitored using the Reservoir Vital Signs Monitoring Program (RVSMP), which focuses on (1) physical and chemical characteristics of waters; (2) physical and chemical characteristics of sediments; (3) sampling the benthic macroinvertebrate community; and (4) fish assemblage sampling. The

RVSMP data include annual fish sampling on tributary reservoirs on a two-year rotation sampling cycle. Ratings are based primarily on fish community structure and function, using an analysis tool known as the Reservoir Fish Assemblage Index (RFAI) (McDonough and Hickman 1999).

Both RFAI and benthic community samples were taken in the forebay area (near the dam) and transition zone of Wheeler Reservoir where the reservoir transitions from a river-like environment to a lake-like one (Table 2-6).

Table 2-6. RFAI and Benthic Community Scores for Wheeler Reservoir (2011-2015)

Year	RFAI Scores		Benthic Community Scores	
	Forebay	Transition	Forebay	Transition
2011	Good	Fair	Poor	Fair
2013	Fair	Good	Fair	Good
2015	Good	Good	Poor	Good

Source: TVA 2016a

Fair ratings for the fish communities were largely due to the collection of fewer individual fish and fish species than expected, and often a greater proportion of those were tolerant of poorer water quality conditions (e.g. bluegill and largemouth bass). The last year sampled where the fish community rated good at all locations was 2005. The fish species collected during the RVSMP sampling efforts represent typical species found in large river and lentic habitats (Table 2-7).

Table 2-7. Fish Species in Wheeler Reservoir

Common Name	Scientific Name
Bigmouth buffalo	*Ictiobus cyprinellus*
Black buffalo	*Ictiobus niger*
Black crappie	*Pomoxis nigromaculatus*
Black redhorse	*Moxostoma duquesnei*
Blackstripe topminnow	*Fundulus notatus*
Blue catfish	*Ictalurus furcatus*
Blue sucker	*Cycleptus elongatus*
Bowfin	*Amia calva*
Brook silverside	*Labidesthes sicculus*
Bullhead minnow	*Pimephales vigilax*
Channel catfish	*Ictalurus punctatus*

Common Name	Scientific Name
Chestnut lamprey	*Ichthyomyzon castaneus*
Common carp	*Cyprinus carpio*
Dusky darter	*Percina sciera*
Flathead catfish	*Pylodictis olivaris*
Freshwater drum	*Aplodinotus grunniens*
Gizzard shad	*Dorosoma cepedianum*
Golden redhorse	*Moxostoma erythrurum*
Golden shiner	*Notemigonus crysoleucas*
Green sunfish	*Lepomis cyanellus*
Hybrid striped x white bass	*Hybrid morone (chrysops x sax)*
Largemouth bass	*Micropterus salmoides*
Largescale stoneroller	*Campostoma oligolepis*
Logperch	*Percina caprodes*
Longear sunfish	*Lepomis megalotis*
Longnose gar	*Lepisosteus osseus*
Mississippi silverside	*Menidia audens*
Northern hog sucker	*Hypentelium nigricans*
Orangespotted sunfish	*Lepomis humilis*
Quillback	*Carpiodes cyprinus*
Redbreast sunfish	*Lepomis auritus*
Redear sunfish	*Lepomis microlophus*
River carpsucker	*Carpiodes carpio*
River darter	*Percina shumardi*
River redhorse	*Moxostoma carinatum*
Sauger	*Stizostedion canadense*
Silver redhorse	*Moxostoma anisurum*
Skipjack herring	*Alosa chrysochloris*
Smallmouth bass	*Micropterus dolomieu*
Smallmouth buffalo	*Ictiobus bubalus*
Smallmouth redhorse	*Moxostoma breviceps*
Snubnose darter	*Etheostoma simoterum*
Spotfin shiner	*Cyprinella spiloptera*
Spotted bass	*Micropterus punctulatus*
Spotted gar	*Lepisosteus oculatus*
Spotted sucker	*Minytrema melanops*
Streamline chub	*Erimystax dissimilis*
Striped bass	*Morone saxatilis*
Striped shiner	*Luxilus chrysocephalus*
Stripetail darter	*Etheostoma kennicotti*
Threadfin shad	*Dorosoma petenense*
Warmouth	*Lepomis gulosus*
White bass	*Morone chrysops*

Common Name	Scientific Name
White crappie	*Pomoxis annularis*
Yellow bass	*Morone mississippiensis*
Yellow perch	*Perca flavescens*

Source: TVA 2016c

Bottom life rated poor to fair at the forebay, and fair to good at the transition monitoring location. The lower ratings were due to relatively sparse populations, predominantly composed of animals able to tolerate poor water quality (i.e., low dissolved oxygen).

2.2.4.1 Invasive Nonnative Aquatic Species

Although there are many exotic or introduced aquatic species within the region, there are a few species that are considered more detrimental due to their ability to have broad impacts to overall aquatic systems as well as direct impacts to humans. These include Asian carp, especially bighead carp (*Hypophthalmichthys nobilis*) and silver carp (*Hypophthalmichthys molitrix*) (EDDMapS 2016), and zebra mussels (*Dreissena polymorpha*).

Asian carp cause serious damage to the native fish populations in the lakes and rivers that they infest because they out-compete other fish for food and space. Carp are also thought to lower water quality, which can kill off sensitive organisms like native freshwater mussels. Asian carp have been known to dominate entire streams, effectively pushing out the native species. Asian carp are also known to pose danger to humans due to their habit of jumping out of the water and striking boaters and water skiers and damaging boats and equipment.

Zebra mussels are known for their biofouling capabilities by colonizing water supply pipes of hydroelectric and nuclear power plants, public water supply plants, and industrial facilities. They colonize pipes constricting flow, therefore reducing the intake in heat exchangers, condensers, firefighting equipment, and air conditioning and cooling systems. Navigational and recreational boating can be affected by increased drag due to attached mussels. Small mussels can get into engine cooling systems causing overheating and damage. Navigational buoys have been sunk under the weight of attached zebra mussels. Zebra mussels can have profound effects on the ecosystems they invade. They primarily consume phytoplankton, but other suspended material is filtered from the water column including bacteria, protozoans, zebra mussel veligers, other microzooplankton and silt (Benson et al. 2016).

For information on aquatic ecology and potential impacts of the draft RLMP, see Section 3.6, Volume I of the EIS.

2.2.5 Threatened and Endangered Species

TVA biologists and natural resource specialists used the TVA Natural Heritage database to assess the endangered and threatened species within and around Wheeler Reservoir. The TVA Natural Heritage database was created to ensure that environmental compliance activities are conducted in a consistent manner across the TVA Region and that these activities meet the requirements of National Environmental Policy Act (NEPA) and the Endangered Species Act. Federally listed and state-listed species identified within the six Wheeler Reservoir counties from the TVA Natural Heritage database are presented in Table 2-8. For the purpose of this document state-listed species includes those that are being tracked, in need of management, candidates, proposed for listing and of special concern. As noted below, there are nine listed plants species occurring on TVA parcels on Wheeler Reservoir. There are six terrestrial wildlife species known to occur on TVA parcels, however, suitable habitat is present for many of the other listed species. Twelve listed aquatic species are known to occur within TVA parcels and an additional 62 are known to occur in the reservoir adjacent to the parcels.

In order to determine which of the species listed in each county are known to occur in the general vicinity of the reservoir, a more refined database search was conducted. Database searches are based on the following criteria: (1) distance, (2) element occurrence rank values, and (3) species or type of element present. Accordingly, plants are assessed within a 5-mile radius, aquatic species within a 10-mile radius, and terrestrial species within a 3-mile radius.

Table 2-8. Federally and State-Listed Species in the Wheeler Reservoir Counties

Common Name	Scientific Name	Status	
		Federal	State
Amphibians			
Green salamander	*Aneides aeneus*	--	PROT (S3)
Hellbender	*Cryptobranchus alleganiensis*	PS	PROT (S2)
Tennessee cave salamander	*Gyrinophilus palleucus*	--	PROT
Arachnids			
A cave obligate pseudoscorpion	*Alabamocreagris pecki*	--	TRKD (S1S2)
A cave obligate spider	*Nesticus barri*	--	TRKD (S3)
Cave spring cave spider	*Nesticus jonesi*	--	TRKD (S1)

Common Name	Scientific Name	Status	
		Federal	State
Birds			
Appalachian Bewick's wren	*Thryomanes bewickii altus*	--	PROT (S1)
Bald eagle	*Haliaeetus leucocephalus*	DM	PROT (S3)
Bewick's wren	*Thryomanes bewickii*	--	PROT (SH)
Cerulean warbler	*Setophaga cerulea*	--	NOST (S1)
Common barn-owl	*Tyto alba*	--	TRKD (S3)
Lark sparrow	*Chondestes grammacus*	--	TRKD (S3)
Osprey	*Pandion haliaetus*	--	TRKD (S5)
Peregrine falcon	*Falco peregrinus*	PS:LE	PROT (SH)
Red-cockaded woodpecker	*Picoides borealis*	LE	PROT (S2)
Warbling vireo	*Vireo gilvus*	--	TRKD (S1)
Crustaceans			
A crayfish	*Orconectes australis*	--	TRKD (S3)
A troglobitic crayfish	*Cambarus veitchorum*	--	TRKD (S1)
Alabama blind cave shrimp	*Palaemonias alabamae*	LE	SP (S1S2)
Shelta cave crayfish	*Orconectes sheltae*	--	POTL (S1)
Slenderclaw	*Cambarus cracens*	--	TRKD (S2)
Troglobitic crayfish	*Cambarus jonesi*	--	SPCO (S2)
Troglobitic crayfish	*Cambarus hamulatus*	--	SPCO (S3?)
Troglobitic crayfish	*Procambarus pecki*	--	TRKD (S2?)
Diplopods			
A cave obligate millipede	*Pseudotremia nyx*	--	TRKD (S1)
Fish			
Alabama cavefish	*Speoplatyrhinus poulsoni*	LE	PROT (S1)
Bankhead darter	*Percina sipsi*	--	TRKD (S1)
Bigeye chub	*Hybopsis amblops*	--	TRKD (S3)
Blotched chub	*Erimystax insignis*	--	TRKD (S2)
Bluebreast darter	*Etheostoma camurum*	--	TRKD (S1)
Blueside darter	*Etheostoma jessiae*	--	TRKD (S3)
Boulder darter	*Etheostoma wapiti*	LE	PROT (S1)
Chestnut lamprey	*Ichthyomyzon castaneus*	--	TRKD (S2)
Crown darter	*Etheostoma corona*	--	TRKD (S2)
Fantail darter	*Etheostoma flabellare*	--	TRKD (S3)
Flame chub	*Hemitremia flammea*	--	TRKD (S3)
Gilt darter	*Percina evides*	--	TRKD (S2)
Greenside darter	*Etheostoma blennioides*	--	TRKD (S3)
Lollipop darter	*Etheostoma neopterum*	--	PROT (S1)
Mountain brook lamprey	*Ichthyomyzon greeleyi*	--	TRKD (S1)
Mountain madtom	*Noturus eleutherus*	--	TRKD (S1)
Paddlefish	*Polyodon spathula*	--	PROT (S3)
Redline darter	*Etheostoma rufilineatum*	--	TRKD (S3)
River carpsucker	*Carpiodes carpio*	--	TRKD (S2)
River darter	*Percina shumardi*	--	TRKD (S3)
Rosyface shiner	*Notropis micropteryx*	--	TRKD (S2)
Sawfin shiner	*Notropis sp. 4*	--	TRKD (S2)
Silver redhorse	*Moxostoma anisurum*	--	TRKD (S2)
Silver shiner	*Notropis photogenis*	--	TRKD (S1)

Common Name	Scientific Name	Status	
		Federal	State
Slackwater darter	*Etheostoma boschungi*	LT	PROT (S1)
Slender madtom	*Noturus exilis*	--	TRKD (S3)
Snail darter	*Percina tanasi*	LT	PROT (S1)
Snubnose darter	*Etheostoma simoterum*	--	TRKD (S3)
Southern cavefish	*Typhlichthys subterraneus*	--	PROT (S3)
Southern redbelly dace	*Chrosomus erythrogaster*	--	TRKD (S3)
Spotfin chub	*Erimonax monachus*	LT	PROT (SX)
Spring pygmy sunfish	*Elassoma alabamae*	LT	PROT (S1)
Stargazing minnow	*Phenacobius uranops*	--	TRKD (S1)
Stonecat	*Noturus flavus*	--	TRKD (S1)
Stripetail darter	*Etheostoma kennicotti*	--	TRKD (S3)
Tuscumbia darter	*Etheostoma tuscumbia*	--	PROT (S2)
Tuskaloosa darter	*Etheostoma douglasi*	--	TRKD (S2)
Gastropods			
Anthony's river snail	*Athearnia anthonyi*	LE	PROT (S1)
Armored marstonia	*Marstonia pachyta*	LE	PROT (S1)
Armored rocksnail	*Lithasia armigera*	--	SPCO (S3S4)
Atlas pebblesnail	*Somatogyrus humerosus*	--	HIST (SH)
Corpulent hornsnail	*Pleurocera corpulenta*	--	TRKD (S1)
Golden pebblesnail	*Somatogyrus aureus*	--	HIST (SH)
Knob mudalia	*Leptoxis minor*	--	EXTI (SX)
Muddy rocksnail	*Lithasia salebrosa*	--	TRKD (S1)
Noble hornsnail	*Pleurocera nobilis*	--	TRKD (S2)
Ornate rocksnail	*Lithasia geniculata*	--	SPCO (S1)
Ovate pebblesnail	*Somatogyrus excavatus*	--	HIST (SH)
Rolling pebblesnail	*Somatogyrus strengi*	--	T (SH)
Round-rib elimia	*Elimia nassula*	--	TRKD (S1)
Rugged hornsnail	*Pleurocera alveare*	--	TRKD (S2)
Shortspire hornsnail	*Pleurocera curta*	--	TRKD (S1S2)
Skirted hornsnail	*Pleurocera pyrenella*	--	TRKD (S2)
Slender campeloma	*Campeloma decampi*	LE	PROT (S1)
Slowwater elimia	*Elimia interveniens*	--	TRKD (S2)
Spiral hornsnail	*Pleurocera brumbyi*	--	TRKD (S2)
Telescope hornsnail	*Pleurocera walkeri*	--	TRKD (S3)
Varicose rocksnail	*Lithasia verrucosa*	--	TRKD (S3)
Warty rocksnail	*Lithasia lima*	--	HIST (SH)
Insects			
A beetle	*Batrisodes specus*	--	TRKD (S2)
A beetle	*Ptomaphagus laticornis*	--	TRKD (S1)
A beetle	*Batriasymmodes spelaeus*	--	TRKD (S3)
A beetle	*Batrisodes valentinei*	--	TRKD (S2)
A beetle	*Ptomaphagus valentinei*	--	TRKD (S2)
A beetle	*Lesteva pallipes*	--	TRKD (S1)
A beetle	*Catops gratiosa*	--	PROT (S2)
A beetle	*Batrisodes jocuvestus*	--	TRKD (S1)
A beetle	*Batrisodes subterraneus*	--	TRKD (S1)
A caddisfly	*Triaenodes abus*	--	RARE (S1)

Common Name	Scientific Name	Status	
		Federal	State
A caddisfly	*Hydropsyche simulans*	--	RARE (S1)
A caddisfly	*Hydropsyche cuanis*	--	TRKD (S1)
A caddisfly	*Rhyacophila minor*	--	TRKD (S1)
A caddisfly	*Rhyacophila fenestra*	--	RARE (S1)
A caddisfly	*Hydropsyche rotosa*	--	RARE (S1)
A caddisfly	*Micrasema scotti*	--	TRKD (S1)
A caddisfly	*Chimarra socia*	--	TRKD (S1)
A caddisfly	*Cheumatopsyche kinlockensis*	--	RARE (S1)
A caddisfly	*Polycentropus nascotius*	--	TRKD (S1)
A caddisfly	*Rhyacophila carolae*	--	RARE (S1)
A caddisfly	*Psilotreta labida*	--	TRKD (S1)
A caddisfly	*Dolophilodes major*	--	TRKD (S1)
A cave obligate beetle	*Pseudanophthalmus profundus*	--	TRKD (S2)
A cave obligate beetle	*Pseudanophthalmus alladini*	--	TRKD (S2)
A cave obligate beetle	*Pseudanophthalmus meridionalis*	--	TRKD (S2)
A cave obligate beetle	*Pseudanophthalmus fluviatilis*	--	TRKD (S2)
A cave obligate beetle	*Speleochus synstygicus*	--	TRKD (S1)
A cricket	*Ceuthophilus stygius*	--	TRKD (S2)
A glossosomatid caddisfly	*Agapetus hessi*	--	TRKD (S1)
A ground beetle	*Pseudanophthalmus lodingi*	--	TRKD (S2)
A ground beetle	*Pseudanophthalmus distinguens*	--	TRKD (S1)
A ground beetle	*Rhadine caudata*	--	TRKD (S2)
A hexapod	*Litocampa henroti*	--	TRKD (S1)
A springtail	*Pseudosinella hirsuta*	--	TRKD (S3)
A glossosomatid caddisfly	*Agapetus gelbae*	--	RARE (S1)
Mammals			
Allegheny woodrat	*Neotoma magister*	--	TRKD (S3)
Appalachian cottontail	*Sylvilagus obscurus*	--	TRKD (S1)
Gray bat	*Myotis grisescens*	LE	PROT (S2)
Indiana bat	*Myotis sodalis*	LE	PROT (S2)
Little Brown bat	*Myotis lucifugus*	--	TRKD (S3)
Long-tailed weasel	*Mustela frenata*	--	PROT (S3)
Meadow jumping mouse	*Zapus hudsonius*	PS	PROT (S3)
Northern long-eared bat	*Myotis septentrionalis*	LT	PROT (S2)
Prairie Vole	*Microtus ochrogaster*	--	TRKD (S2)
Rafinesque's Big-eared bat	*Corynorhinus rafinesquii*	--	PROT (S2)
Southeastern bat	*Myotis austroriparius*	--	PROT (S2)
Tricolored bat	*Perimyotis subflavus*	--	NOST (S3)
Mussels			
Acornshell	*Epioblasma haysiana*	--	EXTI (SH)
Angled riffleshell	*Epioblasma biemarginata*	--	EXTI (SX)
Birdwing pearlymussel	*Lemiox rimosus*	LE	PROT (SX)
Black sandshell	*Ligumia recta*	--	TRKD (S2)
Butterfly	*Ellipsaria lineolata*	--	TRKD (S3)
Clubshell	*Pleurobema clava*	LE	PROT (SX)
Cracking pearlymussel	*Hemistena lata*	LE	PROT (SX)
Creeper	*Strophitus undulatus*	--	TRKD (S1)

Common Name	Scientific Name	Status	
		Federal	State
Cumberland Bean	*Villosa trabalis*	LE	PROT (SX)
Cumberland leafshell	*Epioblasma stewardsonii*	--	EXTI (SX)
Cumberland moccasinshell	*Medionidus conradicus*	--	PROT (S1)
Cumberland monkeyface	*Quadrula intermedia*	LE	PROT (S1)
Cumberlandian combshell	*Epioblasma brevidens*	LE	PROT (S1)
Deertoe	*Truncilla truncata*	--	TRKD (S1)
Dromedary pearlymussel	*Dromus dromas*	LE	PROT (S1)
Elktoe	*Alasmidonta marginata*	--	EXTI (SX)
Fanshell	*Cyprogenia stegaria*	LE	PROT (S1)
Fine-rayed pigtoe	*Fusconaia cuneolus*	LE	PROT (S1)
Fluted kidneyshell	*Ptychobranchus subtentum*	LE	PROT (SX)
Hickorynut	*Obovaria olivaria*	--	EXTI (SX)
Kidneyshell	*Ptychobranchus fasciolaris*	--	TRKD (S1)
Leafshell	*Epioblasma flexuosa*	--	EXTI (SX)
Lilliput	*Toxolasma parvum*	--	TRKD (S3)
Long-solid	*Fusconaia subrotunda*	--	TRKD (S1)
Monkeyface	*Quadrula metanevra*	--	TRKD (S3)
Mucket	*Actinonaias ligamentina*	--	TRKD (S2)
Ohio pigtoe	*Pleurobema cordatum*	--	TRKD (S2)
Orange-foot pimpleback	*Plethobasus cooperianus*	LE	PROT (S1)
Orange-nacre mucket	*Lampsilis perovalis*	LT	PROT (S?)
Oyster mussel	*Epioblasma capsaeformis*	LE	PROT (SX)
Painted creekshell	*Villosa taeniata*	--	TRKD (S3)
Pale Lilliput	*Toxolasma cylindrellus*	LE	PROT (S1)
Pheasantshell	*Actinonaias pectorosa*	--	TRKD (S1)
Pink heelsplitter	*Potamilus alatus*	--	TRKD (S2)
Pink mucket	*Lampsilis abrupta*	LE	PROT (S1)
Pink papershell	*Potamilus ohiensis*	--	TRKD (S3)
Purple catspaw	*Epioblasma obliquata*	LE	PROT (SX)
Purple lilliput	*Toxolasma lividus*	--	TRKD (S2)
Pyramid pigtoe	*Pleurobema rubrum*	--	PROT (S2)
Rabbitsfoot	*Quadrula cylindrica*	LT	PROT (S1)
Rainbow	*Villosa iris*	--	TRKD (S3)
Rayed bean	*Villosa fabalis*	LE	PROT (SX)
Ring pink	*Obovaria retusa*	LE	PROT (S1)
Rock pocketbook	*Arcidens confragosus*	--	PROT (S3)
Rough pigtoe	*Pleurobema plenum*	LE	PROT (S1)
Round combshell	*Epioblasma personata*	--	EXTI (SX)
Round hickorynut	*Obovaria subrotunda*	--	TRKD (S2)
Round pigtoe	*Pleurobema sintoxia*	--	TRKD (S1)
Scaleshell	*Leptodea leptodon*	LE	PROT (SX)
Sheepnose	*Plethobasus cyphyus*	LE	PROT (S1)
Shiny pigtoe pearlymussel	*Fusconaia cor*	LE	PROT (S1)
Slabside pearlymussel	*Pleuronaia dolabelloides*	LE	PROT (S1)
Slippershell mussel	*Alasmidonta viridis*		PROT (S1)
Smooth rabbitsfoot	*Quadrula cylindrica*	LT	(PROT (S1)
Snuffbox	*Epioblasma triquetra*	LE	TRKD (S1)

Common Name	Scientific Name	Status	
		Federal	State
Spectaclecase	*Cumberlandia monodonta*	LE	PROT (S1)
Spike	*Elliptio dilatata*	--	TRKD (S1)
Sugarspoon	*Epioblasma arcaeformis*	--	EXTI (SX)
Tan riffleshell	*Epioblasma florentina walkeri*	LE	PROT (SX)
Tennessee clubshell	*Pleurobema oviforme*	--	TRKD (S1)
Tennessee pigtoe	*Fusconaia barnesiana*	--	TRKD (S1)
Tennessee riffleshell	*Epioblasma propinqua*	--	EXTI (SX)
Tuberculed blossom pearlymussel	*Epioblasma torulosa*	LE	PROT (SX)
Turgid blossom pearlymussel	*Epioblasma turgidula*	LE	EXTI (SX)
Wartyback	*Quadrula nodulata*	--	TRKD (S1S2)
Wavy-rayed lampmussel	*Lampsilis fasciola*	--	TRKD (S1S2)
White heelsplitter	*Lasmigona complanata*	--	TRKD (S2S3)
White wartyback	*Plethobasus cicatricosus*	LE	PROT (S1)
Yellow-blossom pearlymussel	*Epioblasma florentina*	LE	PROT (SX)
Reptiles			
Alligator snapping turtle	*Macrochelys temminckii*	--	PROT (S3)
Coal skink	*Plestiodon anthracinus*	--	TRKD (S3)
Red milk snake	*Lampropeltis triangulum syspila*	--	TRKD (S2)
Plants			
Alabama glade-cress	*Leavenworthia alabamica*	--	SLNS (S2)
Alabama larkspur	*Delphinium alabamicum*	--	SLNS (S2)
Alabama snow-wreath	*Neviusia alabamensis*	--	SLNS (S2)
Allegheny blackberry	*Rubus allegheniensis*	--	SLNS (S1)
Allegheny-spurge	*Pachysandra procumbens*	--	SLNS (S2S3)
American beakgrain	*Diarrhena americana*	--	SLNS (S2)
American columbo	*Frasera caroliniensis*	--	SLNS (S2)
American hart's-tongue fern	*Asplenium scolopendrium* var. *americanum*	LT	SLNS (S1)
American smoke-tree	*Cotinus obovatus*	--	SLNS (S2)
Appalachian bugbane	*Actaea rubifolia*	--	SLNS (SH)
Arrow-wood	*Viburnum bracteatum*	--	SLNS (S1)
Bastard toad-flax	*Comandra umbellata*	--	SLNS (S1)
Blue-eyed Mary	*Collinsia verna*	--	SLNS (S1)
Branching Whitlow-wort	*Draba ramosissima*	--	SLNS (S1)
Butler's quillwort	*Isoetes butleri*	--	SLNS (S2)
Butternut	*Juglans cinerea*	--	SLNS (S1)
Canada lily	*Lilium canadense*	--	SLNS (S2)
Canadian milkvetch	*Astragalus canadensis*	--	SLNS (S1)
Carolina spring-beauty	*Claytonia caroliniana*	--	SLNS (S1)
Church's wildrye	*Elymus churchii*	--	SLNS (S1)
Climbing bittersweet	*Celastrus scandens*	--	SLNS (S2)
Clustered poppy-mallow	*Callirhoe alcaeoides*	--	SLNS (S2)
Common horsetail	*Equisetum arvense*	--	SLNS (S2)
Creamflower tick-trefoil	*Desmodium ochroleucum*	--	SLNS (S1S2)
Cumberland rosinweed	*Silphium brachiatum*	--	SLNS (S2)
Duck river bladderpod	*Paysonia densipila*	--	SLNS (S1)
Dutchman's breeches	*Dicentra cucullaria*	--	SLNS (S2)

Common Name	Scientific Name	Status	
		Federal	State
Dwarf filmy-fern	*Trichomanes petersii*	--	SLNS (S2)
Eggleston's violet	*Viola egglestonii*	--	SLNS (S1)
False gromwell	*Onosmodium molle* ssp. *subsetosum*	--	SLNS (S1)
False helleborne	*Melanthium parviflorum*	--	SLNS (S1S2)
False rue-anemone	*Enemion biternatum*	--	SLNS (S2)
Featherfoil	*Hottonia inflata*	--	SLNS (S2)
Fleshy-fruit gladecress	*Leavenworthia crassa*	LE	SLNS (S2)
Gattinger prairie-clover	*Dalea gattingeri*	--	SLNS (S3)
Georgia rock-cress	*Arabis georgiana*	LT	SLNS (S1)
Goldenseal	*Hydrastis canadensis*	--	SLNS (S2)
Gorge filmy fern	*Hymenophyllum tayloriae*	--	SLNS (S1)
Granite gooseberry	*Ribes curvatum*	--	SLNS (S2)
Great yellow wood-sorrel	*Oxalis grandis*	--	SLNS (S1)
Green pitcher plant	*Sarracenia oreophila*	LE	SLNS (S2)
Harper's dodder	*Cuscuta harperi*	--	SLNS (S2)
Harper's grooved-yellow flax	*Linum sulcatum* var. *harperi*	--	SLNS (S1)
Harper's Umbrella-plant	*Eriogonum longifolium* var. *harperi*	--	SLNS (S1)
Horse-gentian	*Triosteum angustifolium*	--	SLNS (S1)
Horsemint	*Monarda clinopodia*	--	SLNS (S2)
Interior least trillium	*Trillium pusillum* var. *1*	--	SLNS (S2)
Lake-cress	*Armoracia lacustris*	--	SLNS (S1)
Large whorled pogonia	*Isotria verticillata*	--	SLNS (S2)
Leafy prairie-clover	*Dalea foliosa*	LE	SLNS (S1)
Limestone Adder's-tongue	*Ophioglossum engelmannii*	--	SLNS (S2S3)
Limestone fame-flower	*Phemeranthus calcaricus*	--	SLNS (S2)
Little mountain meadow-rue	*Thalictrum mirabile*	--	SLNS (S2)
Little river canyon onion	*Allium speculae*	--	SLNS (S2)
Lyre-leaf bladderpod	*Lesquerella lyrata*	LT	SLNS (S1)
Michaux leavenworthia	*Leavenworthia uniflora*	--	SLNS (S2)
Mohr's rosin-weed	*Silphium mohrii*	--	SLNS (S1)
Morefield's leather-flower	*Clematis morefieldii*	LE	SLNS (S2)
Moss	*Trichostomum crispulum*	--	SLNS (S2)
Mountain camellia	*Stewartia ovata*	--	SLNS (S2S3)
Muhly grass	*Muhlenbergia sobolifera*	--	SLNS (S1)
Nestronia	*Nestronia umbellula*	--	SLNS (S2)
Nodding trillium	*Trillium flexipes*	--	SLNS (S2S3)
Nuttall's rayless golden-rod	*Bigelowia nuttallii*	--	SLNS (S3)
Ovate catchfly	*Silene ovata*	--	SLNS (S2)
Pasture glade-cress	*Leavenworthia exigua* var. *lutea*	--	SLNS (S1)
Pink turtlehead	*Chelone lyonii*	--	SLNS (S1)
Prairie trillium	*Trillium recurvatum*	--	SLNS (S2)
Prairie-dock	*Silphium pinnatifidum*	--	SLNS (S1)
Price's potato-bean	*Apios priceana*	LT	SLNS (S2)
Puttyroot	*Aplectrum hyemale*	--	SLNS (S2)
Ragged fringe orchid	*Platanthera lacera*	--	SLNS (S2)
Rock clubmoss	*Huperzia porophila*	--	SLNS (S1)
Roundleaf catchfly	*Silene rotundifolia*	--	SLNS (S1S2)

Common Name	Scientific Name	Status	
		Federal	State
Roundleaf sundew	*Drosera rotundifolia*	--	SLNS (S1)
Scarlet Indian-paintbrush	*Castilleja coccinea*	--	SLNS (S1)
Sedge	*Carex purpurifera*	--	SLNS (S2)
Sessile trillium	*Trillium sessile*	--	SLNS (S2)
Shining clubmoss	*Huperzia lucidula*	--	SLNS (S2)
Small white leek	*Allium tricoccum*	--	SLNS (S1)
Smooth blephilia	*Blephilia subnuda*	--	SLNS (S1S2)
Soft false gromwell	*Onosmodium molle* ssp. *molle*	--	SLNS (S2)
Southern meadow-rue	*Thalictrum debile*	--	SLNS (S2)
Southern red trillium	*Trillium sulcatum*	--	SLNS (S1)
St. John's-wort	*Hypericum nudiflorum*	--	SLNS (S2)
Sunnybell	*Schoenolirion croceum*	--	SLNS (S2)
Sweet pinesap	*Monotropsis odorata* var. *odorata*	--	SLNS (S1)
Tennessee bladderfern	*Cystopteris tennesseensis*	--	SLNS (S2)
Tennessee milk-vetch	*Astragalus tennesseensis*	--	SLNS (S1S2)
Tuberous scurfpea	*Pediomelum subacaule*	--	SLNS (S2)
Twinleaf	*Jeffersonia diphylla*	--	SLNS (S2)
Two-leaf bishop's-cap	*Mitella diphylla*	--	SLNS (S1)
Valerian	*Valeriana pauciflora*	--	SLNS (S1)
Wall-rue spleenwort	*Asplenium ruta-muraria*	--	SLNS (S1)
Waterweed	*Elodea canadensis*	--	SLNS (S1)
Wedge-leaf whitlow-grass	*Draba cuneifolia*	--	SLNS (S1)
Wherry's phlox	*Phlox pulchra*	--	SLNS (S2)
Witch-alder	*Fothergilla major*	--	SLNS (S2)
Yellow giant-hyssop	*Agastache nepetoides*	--	SLNS (S1)
Yellow water-crowfoot	*Ranunculus flabellaris*	--	SLNS (S1)

***Federal status abbreviations**: DM = Recovered, delisted, and being monitored; LE = Listed endangered, LT = Listed threatened; PS = Partial status

State status abbreviations: E = Endangered; EXTI = Extirpated from state or region; HIST = Historically known from the area, may be extirpated or extinct; NOST = No status; POTL = Potential Candidate for State Listing; PROT = Protected; RARE = Listed Rare; SLNS = Listed by the state of Alabama, but not assigned a status; SP = State Protected, SPCO= Special concern; T = Threatened; TRKD = Tracked by state natural heritage program (no legal status)

State rank abbreviations:

S1 = Critically Imperiled - Critically imperiled in Alabama because of extreme rarity (5 or fewer occurrences of very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extirpation from Alabama; S2 = Imperiled - Imperiled in state because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extirpation from Alabama; S3 = Vulnerable - Rare or uncommon in Alabama (on the order of 21 to 100 occurrences); S4 = Apparently Secure - Apparently secure in Alabama, with many occurrences; S5 = Secure - Demonstrably secure in Alabama; common, widespread, and abundant in the state; SH = Historical (Possibly Extirpated) – Species or community occurred historically in Alabama, and there is some possibility that it may be rediscovered. Its presence may not have been verified in the past 20-40 years. A species or community could become SH without such a 20-40 year delay if the only known occurrences in a nation or state/province were destroyed or if it had been extensively and unsuccessfully looked for. The SH rank is reserved for species or communities for which some effort has been made to relocate occurrences, rather than simply using this status for all elements not known from verified extant occurrences; SX = Presumed Extirpated – Species or community is believed to be extirpated from Alabama. Not located despite intensive searches of historical sites and other appropriate habitat, and virtually no likelihood that it will be rediscovered. S#S# = Denotes a range of ranks because the exact rarity of the element is uncertain (e.g., S1S2); S? = Unranked at this time or rank uncertain; B = Breeding - Conservation status refers to the breeding population of the species in the state. Regularly occurring, usually migratory and may be present only during the breeding season.

Source TVA 2016a

2.2.5.1 Plants

Reviews of the TVA Natural Heritage database indicate that there are four species federally listed as endangered and four species federally listed as threatened within the surrounding counties. Of these, five species, American hart's-tongue fern, fleshy-fruit gladecress, leafy prairie-clover, Morefield's leather-flower, and price's potato-bean, are known to occur within 5 miles of Wheeler Reservoir. However none are known to occur on any TVA parcels.

There are 100 state-listed plant species within the Wheeler Reservoir counties. Of these plant species, 47 exist within 5 miles of the reservoir and nine have been recorded on TVA parcels (see Table 2-8). All records on TVA parcels are on parcels that would be allocated to Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation). These species and their habitat requirements are discussed in Table 2-9.

The Alabama state champion buttonbush is located within Point Mallard Park, which is a TVA owned parcel that would be allocated to Zone 6 (Developed Recreation).

Table 2-9. Habitat Requirements for Plant Species of Conservation Concern within 5 Miles of Wheeler Reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
Alabama glade-cress	Limestone outcrops, cedar glades, old fields, pastures, rocky knolls, roadsides[5]	Somewhat likely
Alabama snow-wreath	Upland Woods[2]	Likely
American beakgrain	Woodlands[4]	Yes Recorded in a TVA Zone 3 parcel
American columbo	Deciduous forests, near margins and clearings[1]	Likely
American ginseng	Rich moist hardwood dominated woods under a closed canopy[1]	Likely
American hart's-tongue fern	Sinks[2]	Likely
American smoke-tree	Dry, circumneutral soil[2]	Likely
Branching whitlow-wort	Calcareous bluffs[2]	Likely
Butler's quillwort	Limestone outcrops, calcareous glades[3]	Likely
Canada lily	Wet areas including meadows, rich woods, stream sides, bogs, marshes, swamps, roadsides and railroads[5]	Likely
Canadian milkvetch	Moist-dry prairies, stream banks, open woods[3]	Likely
Church's wildrye	Dry rocky soil, open woods, ridges, bluffs, river banks[1]	Yes Recorded on a TVA Zone 3 parcel
Climbing bittersweet	Woodlands, bluffs, stream banks, rocky hillsides, thickets, fence rows, roadsides[3]	Likely
Clustered poppy-mallow	Plains, prairies, roadsides, waste places[5]	Somewhat likely
Creamflower tick-trefoil	Sandy Dry Woods[2]	Somewhat likely
Cumberland rosinweed	Rich Rocky Woods[2]	Yes

Common Name	Habitat Requirements	Suitable Habitat Present
		Recorded on a TVA Zone 3 parcel
Duck River bladderpod	Cultivated fields[2]	Limited habitat
False gromwell	Limestone woods[2]	Likely
Featherfoil	Wet sloughs and ditches. Aquatic[2]	Likely
Fleshy-fruit gladecress	Limestone cedar glades, pastures/fields, roadsides. Near limestone glades[5]	Somewhat likely
Gattinger prairie-clover	Limestone glades[1]	Somewhat likely
Great yellow wood-sorrel	Woods	Yes Recorded on a TVA Zone 4 parcel
Harper's umbrella-plant	Rocky bluffs[2]	Likely
Horse-gentian	Woodlands, bluffs, oak savannas, limestone glades[4]	Likely
Interior least trillium	Alluvial/moist ravines and dry ridges[2]	Likely
Lake-cress	Open water of natural lakes, sloughs, ponds, canals, ditches, and swamps[1]	Likely
Large whorled pogonia	Acidic soils in dry/mesic forests, seeps, and sphagnum bogs.[5]	Likely
Leafy prairie-clover	Rocky washes in glades[2]	Somewhat likely
Limestone adder's-tongue	Over limestone in fields, pastures and cedar glades	Yes Recorded on a TVA Zone 3 parcel
Michaux leavenworthia	Rocky ledges, cedar glades, pastures, roadsides, old fields, seeps[5]	Somewhat likely
Morefield's leather-flower	Seeps/springs In rocky limestone woods[2]	Somewhat likely
Moss	Cliffs[5]	Likely
Muhly grass	Rocky woods, shaded ledges[6]	Yes Recorded on a TVA Zone 4 parcel
Nodding trillium	Rich woods, floodplain forests[5]	Likely
Ovate catchfly	Open oak woods[2]	Likely
Pink turtlehead	Rich coves, spruce-fir forests, open stream banks[3]	Somewhat likely
Price's potato-bean	Opening in rich woods[2]	Likely
Ragged fringe orchid	Sphagnum bogs, alluvial and swamp forests, stream banks, riparian meadows, sandflats, seeps, prairies, roadsides, ditches, fields, borrow pits[5]	Likely
Scarlet Indian-paintbrush	Prairies, meadows, roadsides[3]	Somewhat likely, limited habitat
Sessile trillium	Woodlands, limestone soils, floodplains, riverbanks, clay alluvium, dry limestone woods.[5]	Likely
Smooth blephilia	Rocky limestone forests[1]	Yes Recorded on a TVA Zone 3 parcel
Tennessee milk-vetch	Glades[2]	Somewhat likely
Twinleaf	Rich moist woods, semi open rock slopes and outcrops[5]	Yes Recorded on a TVA Zone 4 parcel
Two-leaf bishop's-cap	Rich woods, ravine slopes[5]	Likely
Waterweed	Aquatic, mostly in calcareous lakes and rivers[5]	Likely

Common Name	Habitat Requirements	Suitable Habitat Present
Wedge-leaf whitlow-grass	Barrens and glades[2]	Somewhat likely
Yellow water-crowfoot	Ponds and marshes[2]	Yes Recorded on a TVA Zone 4 parcel

[1] Source: NatureServe 2016
[2] Source: TDEC 2014
[3] Source: Lady Bird Johnson Wildflower Center 2013
[4] Source: Hilty 2015
[5] Source: Flora of North America 1993

2.2.5.2 Terrestrial Wildlife

Reviews of the TVA Natural Heritage database indicate that there are six terrestrial species federally listed as threatened or endangered and 54 state-listed species in the counties surrounding Wheeler Reservoir (see Table 2-8). Within 3 miles of the reservoir, there are records of four federally listed species and an additional 24 state-listed species (see Table 2-10). Six of these species have been recorded on a TVA parcel. These species and their habitat requirements are described in Table 2-10.

Table 2-10. Habitat Requirements for Terrestrial Wildlife Species of Conservation Concern within 3 Miles of Wheeler Reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
Amphibians		
Green salamander	Damp crevices in shaded rock outcrops, beneath loose bark of dead trees, sometimes under logs[1]	Likely
Hellbender	Creeks and rivers[1]	Likely
Tennessee cave salamander	Aquatic, cave obligate[1]	Likely
Birds		
Bald eagle	Forested areas near open water[1]	Yes Recorded on a TVA Zone 2 parcel
Common barn-owl	Nesting: cliffs, hollow trees, buildings, open forests. Foraging: dense grass fields including marshes[1]	Yes Recorded on a TVA Zone 2 parcel
Peregrine falcon	Nesting: Ledges and opening of cliffs, bluffs, buildings, and occasionally trees. Foraging: Variety of open habitats including wetlands, fields, and lakeshores[1]	Likely
Insects		
A beetle (*Batriasymmodes spelaeus*)	Terrestrial cave obligate[3]	Likely
A beetle (*Batrisodes*	Subterranean obligate[1]	Likely

Common Name	Habitat Requirements	Suitable Habitat Present
valentinei)		
A cave obligate beetle (*Pseudanophthalmus fluviatilis*)	Caves, subterranean[1]	Likely
A cave obligate beetle (*Pseudanophthalmus meridionalis*)	Caves, subterranean[1]	Likely
A cave obligate (*Pseudoscorpion Alabamocreagris pecki*)	Caves, subterranean[1]	Likely
A cave obligate spider (*Nesticus barri*)	Terrestrial cave obligate[3]	Likely
A cricket (*Ceuthophilus stygius*)	Caves[1]	Likely
A ground beetle (*Pseudanophthalmus distinguens*)	Subterranean[1]	Likely
A ground beetle (*Rhadine caudata*)	Ground[1]	Likely
A hexapod (*Litocampa henroti*)	Subterranean[1]	Likely
A springtail (*Pseudosinella hirsuta*)	Caves, subterranean[1]	Likely
Arachnids		
Cave spring cave spider	Caves, subterranean[1]	Likely
Mammals		
Gray bat	Caves[1]	Yes Recorded on TVA Zones 2, 6 and 7 parcels
Indiana bat	In winter, hibernacula are found in caves. During summer, roosts are found in wooded or semi wooded areas that have suitable trees with loose bark[1]	Likely Historical record on a TVA Zone 7 parcel
Little brown bat	Hibernation occurs in caves. Summer roosting occurs in hollow trees, caves, buildings, under bridges, or in culverts. Foraging is over/along waterways[1]	Yes Recorded on a TVA Zone 2 parcel
Northern long-eared bat	Winter hibernacula are found in caves. During summer, roosts are found in wooded or semi wooded areas that have suitable trees with loose bark. Often found in old-growth forests[1]	Likely Recorded acoustically on a TVA Zone 2 parcel and captured via mist net on an adjacent parcel
Prairie vole	Upland herbaceous fields, grasslands, old fields, and thickets[1]	Yes Recorded on a TVA Zone 4 parcel
Rafinesque's big-eared bat	A woodland bat. Hibernation occurs in caves. Summer roosting occurs in hollow trees, buildings, under bridges or in culverts.[1]	Likely
Southeastern bat	Usually roosts in buildings and hollow trees, occasionally uses caves and other man-made structures. Maternity colonies found in caves. Associated	Likely

Common Name	Habitat Requirements	Suitable Habitat Present
	with water[2]	
Tricolored bat	Winter roosts are in caves or cave like areas. Summer roosts are usually found in dead or live tree foliage, caves, and mines. Occasionally found in man-made structures, or tree cavities. Tolerates open areas[1]	Recorded on TVA Zone 6
Reptiles		
Alligator snapping turtle	Slow moving, deep water of rivers, sloughs, oxbows, swamps, and lakes; middle and west Tennessee; obscure[3]	Likely
Red milk snake	Dry open woods, especially along edges. Often in rock outcrops and under logs[2]	Likely

[1] Source: NatureServe 2016
[2] Source: ADCNR 2016
[3] Source: TDEC 2014

2.2.5.2.1 Amphibians

Three species of amphibians are found within 3 miles of Wheeler Reservoir; however none of these species have been recorded on TVA owned parcels. Potentially suitable habitat for the, Tennessee cave salamander, hellbender and the green salamander is possible within Wheeler Reservoir.

2.2.5.2.2 Birds

Of the three birds species recorded within 3 miles of the reservoir, the TVA Natural Heritage database has records of the bald eagle and the common barn owl within TVA parcels. Two of these records occur on a parcel which would be allocated as Zone 2 (Project Operations). The TVA Natural Heritage database does not have any records of the peregrine falcon on any of the Wheeler Reservoir parcels.

2.2.5.2.3 Insects

None of the 14 insect species located within 3 miles of the reservoir have been recorded within TVA parcels. While the seven caves may provide suitable habitat, no occurrences for the species have been records; most likely due to the lack of presence/absence surveys. Fifteen of the 253 caves within 3 miles of the reservoir have records of insects.

2.2.5.2.4 Mammals

Seven species of bats have been identified within 3 miles of the reservoir, however only the little brown bat, gray bat, Indiana bat, tricolored bat and northern long-eared bat has been detected within TVA parcels on Wheeler reservoir. Although records of northern long-eared bat on TVA parcels only come from acoustic recordings, several individuals of this species have been captured via mist net less than 1,000 feet from TVA parcels. All seven bat species use caves and/or forested habitat during some season, therefore it is likely that there is suitable habitat present within TVA parcels for southeastern bat and Rafinesque's big-eared bat as well. There are 253 caves within 3 miles of Wheeler Reservoir, with seven of those caves existing on TVA parcels. Historical records of gray bats and Indiana bat are known from a cave on a TVA parcel that would be allocated to Zone 7 (Shoreline Access). This cave is now flooded and does not support bats. A known summer cave for gray bat and winter cave for small numbers of tricolored bat exists on TVA parcel 3, which would be allocated to Zone 6 (Developed Recreation). A gray bat maternity roost is also known from a cave that occurs immediately adjacent to parcel 88, which would be allocated to Zone 4 (Natural Resource Conservation). Fourteen of the 253 caves within 3 miles of the reservoir have records of bat activity. The prairie vole has also been detected within TVA parcels that would be allocated to Zone 4 (Natural Resource Conservation) on Wheeler Reservoir.

2.2.5.2.5 Reptiles

While the alligator snapping turtles and red milk snakes have been recorded within 3 miles of the reservoir, there are no records of either species within TVA parcels. However, suitable habitat is likely to occur based on land cover data and aerial imagery.

2.2.5.3 Aquatic Species

In the counties surrounding Wheeler Reservoir, there are 45 federally listed aquatic animal species, 35 of which are listed as endangered. There are 104 additional state-listed species (Table 2-8). Within 10 miles of the reservoir, there are 30 federally listed species and an additional 65 state-listed species (Table 2-11). There are 12 listed species recorded on TVA parcels, and 62 listed species have been recorded within the reservoir.

All parcels where listed aquatic species have been recorded would be zoned under the draft RLMP as either Zone 3 (Sensitive Resource Management) or Zone 4 (Natural Resource Conservation).

Table 2-11. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Wheeler Reservoir

Common Name	Habitat Requirement	Suitable Habitat Present
Crustacean		
A crayfish (*Orconectes australis australis*)	Subterranean streams[1]	Unlikely
A troglobitic crayfish (*Cambarus veitchorum*)	Subterranean pools[1]	Unlikely
Alabama blind cave shrimp	Subterranean pools[1]	Unlikely
Troglobitic crayfish (*Cambarus jonesi*)	Cave pools[1]	Unlikely
Troglobitic crayfish (*Procambarus pecki*)	Subterranean pools[1]	Unlikely
Fish		
Bigeye chub[3]	Small to medium tributaries with gravel substrate. Does not tolerate siltation[1]	Yes Recorded on TVA Zones 3 and 4 parcels
Blotched chub	Shallow water of medium streams to small rivers with gravel, rubble, or bedrock substrate.[1]	Likely
Bluebreast darter	Warm creeks-small rivers, runs and riffles[1]	Likely
Blueside darter[3]	Rocky pools and riffles of small fast creeks and rivers[1]	Yes
Boulder darter[3]	Riffles of small to medium rivers[1]	Yes
Chestnut lamprey[3]	Medium to large river and large reservoirs[1]	Yes
Fantail darter	Riffles with gravel/rubble in creeks to medium rivers[1]	Yes Recorded on TVA Zones 3 and 4 parcels
Flame chub	Springs and spring fed streams[1]	Unlikely
Gilt darter[3]	Small-medium rivers with clean water and strong flow[1]	Yes
Mountain madtom	Small to large rivers over gravel substrate[1]	Likely
Paddlefish[3]	Slow water of lakes and large rivers[1]	Yes
Redline darter	Riffles of clear creeks and small to medium rivers[1]	Yes Recorded on TVA Zones 3 and 4 parcels
River carpsucker[3]	Pools and backwaters of rivers and larger creeks[1]	Yes
River darter	Large rivers and tributaries, in deep chutes and riffles[1]	Likely
Rosyface shiner[3]	Swift creeks and small rivers over gravel substrate[1]	Yes Recorded on TVA Zones 3 and 4 parcels
Silver redhorse[3]	Pools and runs of small to large rives, natural lakes and impoundments[1]	Yes Recorded on TVA Zones 3 and 4 parcels
Silver shiner[3]	Rocky runs and riffles in clear weedless rivers[1]	Yes Recorded on TVA

Common Name	Habitat Requirement	Suitable Habitat Present
		Zones 3 and 4 parcels
Slackwater darter	Gravel bottomed pools in slow areas of creeks and small rivers[1]	Likely
Slender madtom	Riffles, rocky pools[1]	Somewhat likely
Snail darter	Medium sized rivers in gravel and sandy runs[1]	Likely
Snubnose darter[3]	Rock pools and riffles of creeks to medium rivers[1]	Likely
Southern cavefish[3]	Aquatic cave obligate; cave streams, karst waters, and water supply wells; reported from all karst regions excluding RV and BR[2]	Yes
Southern redbelly dace	Headwaters and upland creeks[1]	Unlikely
Spring pygmy sunfish[3]	Springs, swamps, wetlands[1]	Yes Recorded on a TVA Zone 4 parcel
Stargazing minnow[3]	Creeks and small to medium rivers in rocky/gravel runs and riffles. Requires warm clear water[1]	Yes Recorded on TVA Zones 3 and 4 parcels
Stonecat	Runs, riffles, rapids in creeks and rivers[1]	Yes Recorded on a TVA Zone 4 parcel
Stripetail darter	Pools of shallow headwater, creeks, small rivers with rocky substrate[1]	
Tuscumbia darter[3]	Ponded spring-fed habitats of valley floor springs; lower Tennessee River; probably extirpated from TN[2]	Yes Recorded on a TVA Zone 4 parcel
Gastropods		
Anthony's river snail[3]	Cobble rubble substrate of large rivers[1]	Yes
Armored marstonia[3]	Stream margins, pool edges[1]	Yes
Noble hornsnail[3]	Freshwater[1]	Yes
Rugged hornsnail	Flowing water on gravel/cobble/boulder substrate. Small-large rivers[1]	Yes
Shortspire hornsnail[3]	Freshwater[1]	Yes
Skirted hornsnail	Creeks, medium rivers. Endemic to tributaries of the Tennessee River[1]	
Spiral hornsnail[3]	Creeks, medium rivers. Endemic to tributaries of the Tennessee River in northern Alabama[1]	Yes
Varicose rocksnail	Rocky shoals and riffle son medium-big rivers with moderate current[1]	
Warty rocksnail[3]	Rocky substrates in riffle systems; Elk River and larger tributaries (Tennessee River watershed) [2]	Yes
Insects		
A caddisfly (*Hydropsyche simulans*)	Streams[1]	Unlikely
A caddisfly (*Rhyacophila fenestra*)	Streams[1]	Unlikely
Mussels		
Acornshell*	Medium to large rivers in riffle beds[1]	Yes
Birdwing pearlymussel[3]	Small to medium rivers in riffles with sand/gravel substrate and moderate to fast current[1]	Yes
Black sandshell[3]	Medium-large rivers in areas with strong currents over rocky substrates[1]	Yes

Common Name	Habitat Requirement	Suitable Habitat Present
Butterfly[3]	Large rivers. Adapts to impoundments[1]	Yes
Cracking pearlymussel[3]	Creeks to large rivers. In fast currents it is found in sand/grave/cobble substrate. In slow current, mud/sand substrates[1]	Yes
Cumberland bean[3]	Shallow riffle and shoal areas of fast moving rivers with gravel substrate[1]	Yes
Cumberland moccasinshell	Small streams and headwaters in sand/gravel substrate[1]	Yes
Cumberland monkeyface	Riffle and shoal areas of headwater streams and bid rivers. Requires clean fast flowing water[1]	Unlikely
Cumberlandian combshell[3]	Shallow water of large creeks to large rivers[1]	Yes
Deertoe[3]	Medium rivers and lakes[1]	Yes
Dromedary pearlymussel	Riffles at sand and gravel shoals of moderate current rivers. In Tennessee, it is also found in deeper slower moving water[1]	Yes
Fanshell[3]	Medium to large streams, sometimes found in rivers with gravel substrate and strong current[1]	Yes
Fine-rayed pigtoe[3]	High gradient clear streams with firm cobble/gravel substrate[1]	Yes
Fluted kidneyshell[3]	Small-medium rivers in swift currents[1]	Yes
Hickorynut[3]	Sand/gravel substrate in deep water[1]	Yes
Kidneyshell[3]	Small to medium rivers, sometime sin shallow areas of impoundments with moving water[1]	Yes
Lilliput[3]	Shallows of lakes, ponds, reservoirs, and rivers[1]	Yes
Monkeyface[3]	Medium to large rivers in gravel/sand substrate[1]	Yes
Mucket[3]	Large creeks and rivers of riffles shoals and runs with strong currents [1]	Yes
Narrow catspaw	Small-medium rivers in fast moving waters over gravel and sand[1]	Likely
Ohio pigtoe[3]	Medium to large rivers. In reservoirs, usually found in tailwaters[1]	Yes
Orange-foot pimpleback[3]	Riffles and shoals in medium to large rivers[1]	Yes
Painted creekshell	Mixed sand and gravel with good current in less than 3 feet water[1]	Likely
Pink heelsplitter	A variety of substrates in low to swift currents. Can adapt to lake habitats[1]	Likely
Pink mucket	Large river species associated with swift currents. May be able to reproduce in impoundments with flowing water[1]	Likely
Pink papershell	Rivers in shallow water with slow currents and sand/gravel/mud substrate[1]	Likely
Pocketbook	Generalized habitat, adapts to both deep impoundments and shallow rivers[1]	Likely
Purple lilliput	Small-medium sized rivers and large creeks, in mud, sand, and gravel substrates; Tennessee and Cumberland river systems in headwater areas[2]	Somewhat likely
Pyramid pigtoe[3]	Rivers with strong current and firm sand/gravel substrates; Tennessee and Cumberland river systems including KY Reservoir[2]	Yes
Rabbitsfoot	Large rivers in sand and gravel; Tennessee and Cumberland systems[2]	Likely

Common Name	Habitat Requirement	Suitable Habitat Present
Rainbow	Riffles along emergent vegetation beds in moderate to strong current. Small to medium rivers, occasionally in lakes[1]	Somewhat likely
Ring pink[3]	Gravel and sandbars of large rivers[1]	Yes
Rough pigtoe[3]	Medium to large rivers in sand/gravel/cobble shoals. Occasionally found in flats and muddy sand[1]	Yes
Round hickorynut	Medium-large rivers in sand and gravel substrate with moderate flow[2]	Likely
Round pigtoe[3]	Medium to large rivers with firm substrate[1]	Yes
Round-rib elimia	Springs and spring branches[1]	Unlikely
Sheepnose[3]	Generally found in deep water mud/sand/gravel bottoms in large rivers with swift currents [1]	Yes
Shiny pigtoe pearlymussel	Shoals and riffles of small to medium rivers. Does not tolerate deep water or reservoirs[1]	Unlikely
Slabside pearlymussel[3]	Large creeks to medium rivers, in riffles/shoals of sand, fine gravel, and cobble substrates with medium current; Tennessee River watershed[2]	Yes
Slender campeloma[3]	Soft sediment in a few lakes and streams[1]	Yes Recorded on a TVA Zone 3 parcel
Slowwater elimia	Flowing water[1]	Somewhat likely
Smooth rabbitsfoot[3]	Small to medium rivers with moderate to swift current[1]	Yes
Snuffbox[3]	Riffles of medium-large rivers with stony or sandy bottoms, in swift currents, usually deeply buried; Tennessee and Cumberland river systems[2]	Yes
Spectaclecase[3]	In shelters areas of large rivers[1]	Yes
Spike[3]	Medium to large rivers in shoals, occasional found in tail waters of dams[1]	Yes
Tan riffleshell*	Headwaters. Riffle sand shoals in gravel substrate[1]	Yes
Tennessee clubshell[3]	Creeks and rivers in shallow riffles and shoals composed of gravel or sand. Occasionally found in deep water habitat south or Watts Bar Dam[2]	Yes
Tennessee heelsplitter	Spring runs, creeks, and small rivers, in substrate of sand and mud; upper Tennessee and Conasauga river watersheds; Blue Ridge and Ridge and Valley[2]	Somewhat likely
Tennessee pigtoe[3]	Riffle sand shoals over rocky substrate in shallow water of creeks and rivers[2]	Yes
Tuberculed blossom pearlymussel[3]	Shallow riffles and shoals with sand/gravel substrate in creeks and medium rivers[1]	Yes
Wartyback	Medium to large rivers in 15 to 18 feet water on sand/mud substrate[1]	Likely
Wavy-rayed lampmussel	Small to medium streams and rivers in riffles over rocky substrate[1]	Likely
White heelsplitter[3]	Rivers, sloughs, backwaters, lakes, reservoirs[1]	Yes

[1]Source: NatureServe 2016
[2] Source: TDEC 2014
[3] Records within the Reservoir

For information on threatened and endangered species and the potential impacts of the draft RLMP, see Volume I, Section 3.7 of the EIS.

2.2.6 Water Quality

Wheeler Reservoir is a large reservoir with moderate average hydraulic residence time of nine days and average depth of 15.7 feet. In the state of Alabama, water use classifications apply water quality criteria adopted for particular uses based on existing utilization, uses reasonably expected in the future, and those uses not now possible because of correctable pollution but which could be made if the effects of pollution were controlled or eliminated. The seven designated uses for interstate and intrastate waters are defined by the Alabama Department of Environment Management (ADEM), Chapter 335-6-11 and include: Outstanding Alabama Water, Public Water Supply, Swimming and Other Whole Body Water-Contact Sports, Shellfish Harvesting, Fish and Wildlife, Limited Warmwater Fishery, and Agricultural and Industrial Water Supply. Waterbodies in Alabama that do not fully support their designated uses based on a review of water quality data and information are considered to be impaired and included in the 303(d) list. ADEM has included Wheeler Reservoir on its 303(d) list of impaired water based on nutrients with a source or cause being agriculture non-point sources (ADEM 2016). ADEM's designated uses for Wheeler Reservoir include swimming and fish and wildlife.

The most recent ratings for dissolved oxygen, chlorophyll, and sediment for Wheeler Reservoir from TVA's Reservoir Ecological Health Ratings program are presented in Table 2-12. The dissolved oxygen rating has been good at the mid-reservoir location and poor at both the forebay and Elk River embayment due to low concentrations in the lower water column during the summer. Dissolved oxygen conditions vary based on streamflow and seasonal conditions. Chlorophyll typically rates as poor at the forebay and Elk River embayment. Ratings have varied between good, fair and poor at the mid-reservoir location. Sediment quality is typically rated as good in Wheeler Reservoir. Exceptions were fair ratings at the mid-reservoir in 1994, 1995 and 2003 when low levels of pesticides (dichlorodiphenyltrichloroethane/dichlorodiphenyltrichloroethane or chlordane) were detected. A fair rating has been determined at the forebay and Elk River embayment locations due to the presence of polychlorinated biphenyls.

Table 2-12. Ecological Health Indicators at Wheeler Reservoir – 2011

Monitoring location	Dissolved Oxygen	Chlorophyll	Sediment
Forebay	Poor	Poor	Fair
Mid-reservoir	Good	Poor	Good
Elk River embayment	Poor	Poor	Fair

Source: TVA 2016a

While water supply intakes and waste water discharges are regulated by the states under the National Pollutant Discharge Elimination System, TVA permits the actual intake and outfall structures under Section 26a of the TVA Act. The most recent state permit/water withdrawal registration data for water supply withdrawals and waste water discharges directly from or to the reservoirs is provided in Table 2-13. This information does not include withdrawals or discharges in the watersheds.

Table 2-13. Direct Reservoir Average Daily Water Supply Withdrawals and Wastewater Discharges – 2016

2010 Water Withdrawal Volume (MGD)			2010 Wastewater Discharge Volume (MGD)		
Municipal	Industrial	Thermo-electric	Municipal	Industrial	Thermo-electric
82.01	70.21	2,749.90	35.63	62.66	2,744.09

Notes: Municipal water withdrawal data includes 5.16 MGD in the impounded portion of Elk River.
Industrial water withdrawal data includes 60.09 MGD for a facility that is now idle.
Industrial wastewater discharge data includes 57.32 MGD for a facility that is now idle.
MGD = Million Gallons per Day
Source: Pers. Comm., Gary Springston, TVA, August 2016.

For information on water quality and potential impacts of the draft RLMP, see Volume I, Section 3.8.

2.2.7 Wetlands

Wetlands are transitional ecosystems between terrestrial and aquatic communities, where saturation with water is the dominant factor in determining the types of plants and animals present. Wetlands are ecologically important because of their beneficial effect on water quality, their moderation of flow regimes by retaining and gradually releasing water, their value as wildlife habitat, and as areas of botanical diversity. Wetlands exist within and adjacent to TVA reservoirs and are influenced by surface water and groundwater connections to the water levels in these reservoirs. The presence of wetlands immediately on or adjacent to TVA reservoirs is related to the land use characteristics and development status of the shoreline. Lands supporting more intense shoreline development are typically noted as having a decrease in wetland features.

Emergent wetlands typically occur in a narrow elevation zone centered on the summer pool elevation and contain water for much of the growing season. Vegetation typically includes cattail, bulrush, arrowhead, and water plantain. Scrub-shrub wetlands are typically associated with reservoir shorelines and coves and are often transition zones between emergent and forested wetlands. The vegetation can include hardwood trees less than 15 feet tall, but are dominated by shrubs such as silky dogwood, red osier dogwood, buttonbush, alder, willow, and elderberry. Forested wetlands occur on lower-lying, undisturbed areas and along tributary streams on power generation sites. These areas are dominated by flood tolerant hardwood species such as oak, maple, and ash.

Vegetated wetlands occur with greater frequency and size along the mainstem reservoirs and tailwaters, such as Wheeler, than along the tributary reservoirs and tailwaters. This is due in part to the larger-sized watersheds of mainstem reservoirs resulting in a greater volume of water; greater predictability of the annual hydrologic regime; shoreline and drawdown zone topography (wider and flatter floodplains, riparian zones, and drawdown zones and large areas of shallow water); and larger sections of relatively still, shallow-water areas. Wetlands tend to be smaller and do not occur as frequently on tributary reservoirs because of the relatively steep drawdown zones, the rolling to steep topography of adjacent lands, shoreline disturbance caused by wave action, and the lower predictability and shorter duration of summer pool levels. Within mainstem reservoirs, wetlands occur on flats between summer and winter pool elevations, on islands, along reservoir shorelines, in dewatering areas, in floodplains, on river terraces, along connecting rivers and streams, around springs and seeps, in natural depressions, in areas dammed by beaver, in and around constructed reservoirs and ponds (diked and/or excavated), and in additional areas that are isolated from other surface waters.

The information presented in this document is derived from the National Wetland Inventory database and supplemented with previous on-the-ground surveys done by TVA, including for the SMI EIS. Field surveys were not performed for this RLMP to gather more up-to-date information regarding the types and locations of wetlands within the Wilson Reservoir. The most abundant wetland types within the Wheeler Reservoir are forested and emergent (Table 2-14). In addition, there are 10.1 acres of wetlands previously identified by TVA within this reservoir that were not assigned a type.

Table 2-14. Wetland Types within the Wheeler Reservoir

Wetland Type	Acres
Unknown	10.1
Scrub-Shrub	1,416.3
Open Water	1,863.3
Emergent	2,703.4
Forested	11,412.6
Total	**17,404.1**

Source: USFWS 2016b

Some of the wetland areas within the reservoir are present in local, state, and federally managed areas including wildlife refuges, wildlife management areas, national forests, parks, and recreation areas and TVA-designated sites, including small wild areas, habitat protection areas, and ecological study areas (see Section 2.2.11).

For information on wetlands and the potential impacts of the draft RLMP, see Volume I, Section 3.9.

2.2.8 Floodplains

The area encompassed by the RLMP extends from the lower limit of TVA's property, just below the Wheeler Dam at approximate TRM 274.15, upstream to about TRM 349.0 at Guntersville Dam. Wheeler Dam is located at TRM 274.9. The 100-year floodplain is the area that would be inundated by the 100-year flood (base flood).

In Wheeler Reservoir, the 100-year flood elevations for the Tennessee River vary from 557.3-feet msl at the Wheeler Dam at TRM 274.9 to elevation 581.1-feet msl at TRM 349.0 just below Guntersville Dam. The 500-year flood elevations vary from 557.3-feet msl at TRM 274.9 to 583.9-feet msl at TRM 349.0. Tabulations of the 100- and 500-year flood elevations are included Appendix D of Volume I of the EIS. For information on the potential impacts of the draft RLMP on floodplains, see also Section 3.10 of Volume I.

2.2.9 Air Quality

In accordance with the Clean Air Act Amendments of 1990, all counties that include parts of the Wheeler Reservoir are designated with respect to compliance, or degree of noncompliance, with the National Ambient Air Quality Standards (NAAQS). The NAAQS have been established to protect the public health and welfare with respect to six pollutants: particulate matter, sulfur dioxide, carbon monoxide, ozone, nitrogen dioxide, and lead. An area with air quality better than

the NAAQS is designated as “attainment;” an area with air quality worse than the NAAQS is designated as “non-attainment.” Lauderdale, Lawrence, Limestone, Madison, Marshall and Morgan counties in Alabama are considered in attainment for all NAAQS. The Sipsey Wilderness is a designated Prevention of Significant Deterioration Class I air quality area approximately 21 miles from the Wheeler Reservoir and is afforded special protection. General information about air emissions and climate change is identified in Volume I.

Sources of air emissions within lands along the Wheeler Reservoir include industrial development, public works projects, developed recreation sites, motorized watercraft (motor boats, jet skis), and other vehicle traffic. Lands that would be allocated to Zone 5 (Industrial) have the greatest potential to support uses that produce higher levels of air emissions. Major sources of air emissions within Zone 5 include industrial and light manufacturing facilities, barges, trucks and personal vehicles, and barge terminals and operations.

Air emissions generated within Wheeler Reservoir vary with type of activity/development. Currently, air emissions from uses on TVA lands on the Wheeler Reservoir are low. Future projects that have the potential to affect ambient air quality would be planned in detail to minimize air emission impacts and would comply with Clean Air Act regulations.

For information on air quality and the potential impacts of the draft RLMP, see Volume I, Section 3.11.

2.2.10 Cultural and Historic Resources

Cultural resources include prehistoric and historic archaeological sites, districts, buildings, structures, and objects, as well as locations of important historic events that lack material evidence of those events. Cultural resources that are listed, or considered eligible for listing, on the National Register of Historic Places (NRHP) are called historic properties. To be considered an historic property, a cultural resource must possess both integrity and significance. A historic property’s integrity is based on its location, design, setting, materials, workmanship, feeling, and association. The significance is established when historic properties meet at least one of the following criteria: (a) are associated with important historical events or are associated with the lives of significant historic persons; (b) embody distinctive characteristics of a type, period, or method of construction; (c) represent the work of a master, or have high artistic value; or (d) have yielded or may yield information important in history or prehistory (36 Code of Federal Regulations [CFR] Part 60.4).

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effects of their proposed undertakings on historic properties and provide the Advisory Council on Historic Preservation an opportunity to comment on those effects. TVA determined that the draft RLMP (Alternative B) is an “undertaking” as defined by the regulations under NHPA. Once an action is determined to be an undertaking, the regulations require agencies to consider whether the proposed activity has the potential to impact historic properties. If the undertaking is such an activity, then the agency must follow the following steps: (1) involve the appropriate consulting parties; (2) define the area of potential effects (APE); (3) identify historic properties in the APE; (4) evaluate possible effects of the undertaking on historic properties in the APE; and (5) resolve adverse effects (36 CFR Section [§] 800.4 through 800.13). An APE is defined as the “geographic area or areas within which the undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR § 800.16). Concerning cultural resources, the APE is taken as the affected environment for purposes of this EIS. TVA defined the APE to be the approximately 5,095-acre area where TVA is proposing in its RLMP (Alternative B) to change the current Zone allocations.

Section 106 of the NHPA requires federal agencies to consult with the respective State Historic Preservation Officer and Indian tribes when proposed federal actions could affect historic and cultural resources, including archaeological resources, which are also protected under the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act, in addition to the NHPA.

2.2.10.1 Archaeological Resources

The Wheeler Reservoir region has been an area of human occupation for the last 12,000 years. Human occupation in the Valley includes five broad cultural periods: Paleo-Indian (Older than 9,200 BC), Archaic (9,200-1,000 BC), Woodland (1,000 BC-AD 900), Mississippian (AD 900-1,500), and Historic (AD 1,500-present). These divisions are based on stylistic changes in artifact types and technological and cultural adaptations. Prehistoric land use and settlement patterns vary during each period, but short- and long-term habitation sites are generally located on flood plains and alluvial terraces along rivers and tributaries. Specialized campsites tend to be located on older alluvial terraces and in the uplands. During the later Protohistoric/Historic period (sixteenth century) the area contained a small number of aboriginal settlements. At this time the Cherokee occupied the region to the north and east along the headwaters of the

Tennessee River, the Upper Creeks bordered the area south of the Cherokee, and the Chickasaw occupied the western Tennessee Valley (Altschul 1980). One early Euro-American settler to the area was John “Old Man” Ditto. Ditto established Ditto’s Ferry that provided access to the lands on the south side of the Tennessee River, which were still claimed by the Cherokee and Chickasaw. The influx of European settlers into the region from neighboring states spurred the forced cession of Cherokee and Chickasaw lands in the Treaties of 1806, 1817, and 1819 (Abram 2013; Kappler 1904a: 143, 1904b: 179; O’Brien 2013). Following Native American cession and removal, Euro-American settlement increased. Towns such as Huntsville and Decatur were founded and rapidly grew. Cotton was the principal crop but the region also contained smaller-scale subsistence level farming. The region gained national significance during the Civil War, when it was a major strategic area because of the railroad and the Tennessee River. After the Civil War, a system of tenant farming and sharecropping replaced the large plantation farming. Beginning in the late 1880s, textile mills acquired greater prominence in North Alabama**.** Archaeological resources associated with the antebellum and post-antebellum periods include remains associated with individual farmsteads or larger scale plantations and civic, ceremonial, and industrial sites.

The earliest formal archaeological investigations in the region began long prior to the impoundment of Wheeler Reservoir and were undertaken by Ephraim Squier and Edward Davis (1848), Cyrus Thomas (1894), and Clarence B. Moore (1915). These early investigations were primarily concerned with prehistoric monumental architecture, caves, and large shell midden sites. During the years leading up to the construction of Joe Wheeler Dam, TVA, utilizing labor from the Works Projects Administration, conducted large-scale archaeological excavations in Wheeler Basin (Webb 1939). These excavations also focused on large shell midden sites and large mound civic/ceremonial centers, and they provided detailed information regarding the chronological occupation of the region. Excavations at the Whitesburg Bridge and Flint River sites, and on several mound and midden sites on and adjacent to Hobbs Island in Madison County, revealed deep deposits spanning the Archaic through Mississippian cultural periods. In recent decades, TVA fee-owned land has been subject to both systematic and opportunistic archaeological surveys for TVA undertakings and land planning actions. The largest of these archaeological investigations in the Wheeler Reservoir was approximately 10,000 acres and was conducted by the University of Alabama, Office of Archaeological Services (Shaw et al. 2000) and approximately 443 miles or shoreline conducted by the University of Tennessee’s Archaeological Research Laboratory (Gage and Herrmann 2009). However, only 8 percent of

Wheeler TVA fee-owned land has been subject to systematic archaeological survey. Thus, archaeological surveys have not been conducted on all of the lands involved in this land planning process. Moreover, many of the previously reported archaeological sites have not been assessed for their NRHP eligibility. Within the 5,068 acres subject to TVA's zone reallocation, these limited archaeological surveys resulted in the identification of 148 archaeological sites.

2.2.10.2 Historic Structures

The acquisition of land for Wheeler Reservoir resulted in the removal of many structures and other man-made features. The few structures that remain represent all historical periods including individual farmsteads or larger scale plantations, civic or religious sites such as churches, cemeteries or schools, and industrial sites such as mills. In addition, structures associated with the inception of TVA have historic significance. TVA has conducted a survey of all of the major hydroelectric facilities that TVA built. As a result of this survey, Wheeler Dam and its associated structures was nominated for listing in the NRHP. In July 2016, these structures were formally placed on the NRHP. Furthermore, many historic structures remain on adjacent non-TVA land that may be indirectly impacted by activities on TVA land.

For more information on cultural resources and the potential impacts of the draft RLMP, see Volume I, Section 3.12.

2.2.11 Natural Areas and Ecologically Significant Sites

Natural areas include managed areas, ecologically significant sites, and Nationwide Rivers Inventory (NRI) streams. Managed areas include lands held in public ownership that are managed by an entity (e.g., TVA, National Park Service, USFWS, state of Alabama, Limestone County) to protect and maintain certain ecological and/or recreational features. A management plan or similar document defines what types of activities are compatible with the intended use of the managed area. Ecologically significant sites are tracts of privately owned land either that are recognized by resource biologists as having significant environmental resources or identified tracts on TVA lands that are ecologically significant, but not specifically managed by TVA's Natural Areas Program. Nationwide Rivers Inventory streams are free-flowing segments of rivers recognized by the National Park Service as possessing outstandingly remarkable natural or cultural values that may potentially qualify them as part of the National Wild and Scenic Rivers System.

The TVA Natural Heritage database indicates that there are 26 natural areas on or within TVA parcels along Wheeler Reservoir. The TVA Natural Areas Program manages eight of the 26 natural areas. An additional 20 natural areas are located within 3 miles of Wheeler Reservoir. The natural areas on Wheeler Reservoir include TWRA lands, city parks, and state parks. For more information on managed areas and sensitive ecological sites, see Volume I, Section 3.13 or Appendix D.

2.2.12 Aesthetics and Visual Resources

Wheeler Reservoir provides a wide variety of scenic resources to a region that is composed largely of level to slightly rolling farmland. The upper third of the reservoir is riverine in character, with only a few stretches of the eroded high-bank shorelines typical of most mainstream tailwater areas. Of notable visual significance are the numerous high rock bluffs that dominate the landscape and exhibit many unique facades that evidence centuries of change. This upper portion of the reservoir is also accented by a number of tributary creeks and rivers that afford boating access for a number of miles from the main channel. These streams offer quiet settings as they meander through bottomland hardwood stands, swamps, and occasional high-bank, bluff-type landscapes.

The mid-portion of the reservoir takes on more lake-like characteristics, with the shoreline composed largely of wildlife refuges and shallow backwater areas that are occupied by aquatic plants during much of the year.

Spring Creek embayment affords the viewer a somewhat unusual setting visible mainly to the small boater and the back-road traveler. This deep-water embayment provides a calm, pastoral setting at human scale, which is a welcome relief from the vastness of the main reservoir. Its shoreline is agricultural in nature, broken intermittently by small timber stands and devoid of development. On a similar scale is the Elk River, navigable by small boats for many miles from the reservoir. While residential development dots much of the lower section of the Elk River, some of the most notable visual assets are found along its shores. High, sculpted rock bluffs and calm, stump-filled areas lined with stands of bottomland hardwoods can be found for miles along its reaches.

The lower portion of the main reservoir holds the largest concentrations of primary and secondary lake homes. These range in size from mobile homes and cottages to large primary residences. Concentrations of residents are greatest along the northern shoreline and along Elk

River. This appears, in part, to be a result of available private land and the proximity to numerous small towns and communities. While Wheeler Reservoir supports a large industrial usage, it does not have the residential densities of most other TVA lakes, nor does it receive the same boating use.

For information on visual resources and the potential impacts of the draft RLMP, see Volume I, Section 3.14

2.2.13 Noise

Sources of noise within lands along the Wheeler Reservoir include those associated with industrial development, developed recreation sites, and uses related to TVA project operations and various public works projects. Characteristics of noise emissions associated with common land uses are identified in Volume I, Section 3.15.

Lands allocated to Zone 5 (Industrial) have the greatest potential to support uses that produce high levels of noise. . The most common measurement of sound and environmental noise is the A-weighted decibel scale (dBA). This is a logarithmic scale that ranges from 0 dBA to about 140 dBA and approximates the range of human hearing. Common sources of noise from industrial uses include: heavy trucks; rail and barge operations; and industrial workplaces. Noise emission levels for these sources can range from 85 dBA to 100 dBA (U.S. Department of the Interior [USDOI] 2008) and are dependent on the distance from the noise source. Lands allocated to Zone 2 (Project Operations) and Zone 6 (Developed Recreation) also have the potential to generate noise, but typically to a lesser degree than industrial development. The primary source of noise from land allocated to Zone 2 is the Wheeler Dam Reservation, including the dam, navigation lock and associated barge operations, access roads; and boat ramp and parking area. Noise emission levels for these sources can range from 70 dBA to 90 dBA (USDOI 2008) and are also dependent on the distance from the noise source. The primary source of noise from land allocated to Zone 6 (Developed Recreation) would be commercial marinas, motorized watercraft (i.e., motor boats and jet skis) and road traffic. Noise emission levels for land uses allocated to this zone can range from 40 A-weighted decibels (dBA) (very quiet) to 90 dBA (jet ski). Noise levels for motor boats and jet skis may also exhibit short elevated bursts of noise as a result of speed of the watercraft and other operational factors.

TVA land that would be allocated to Zone 3 (Sensitive Resource Management), Zone 4 (Natural Resource Conservation) and Zone 7 (Shoreline Access) account for the majority (80 percent) of

land uses at Wheeler Reservoir. Such land uses generally would not create noise emissions that would have an effect on the ambient noise environment and reflect a general environment consisting of low noise levels.

Approximately 20 percent of land along the reservoir would be allocated to zones that would support land uses with the potential for noise emissions (Zones 2, 5, and 6). Noise from land uses varies with the type of development and would attenuate with distance from the source and as such, the noise level around the reservoir is relatively low. Any future projects on parcels that have the potential to affect noise emissions would be planned in detail and may be expected to consist of both water-dependent facilities and other common actions as well as new developments as allowed per each land use zone.

2.2.14 Socioeconomics and Environmental Justice

2.2.14.1 Population and Percent Growth – Wheeler Reservoir

The population of the Wheeler Reservoir area is described in Table 2-15. Madison County has the highest population of 353,089 representing an increase of 5.5 percent since 2010. Overall, the total populations within the area excluding Madison County range from 33,115 in Lawrence County to 119, 565 in Morgan County. Populations of Lauderdale and Lawrence declined by 0.4 and 2.1 percent, respectively, from 2010 to 2015. Limestone, Madison, and Marshall counties all had higher growth rates than the state of Alabama. Three of the six counties, Lauderdale, Lawrence, and Morgan, are projected to decline in total population between 2015 and 2020. Limestone County has highest percent change from 2010 to 2015 at 10.7 percent and projected growth rate for 2015 to 2020 at 8.8 percent.

Three of the six area counties are greater than 50 percent rural, including Limestone, Lawrence, and Marshall counties. Lauderdale County in addition to the previous three counties mentioned, has a more rural population than the 41 percent rural population in the state of Alabama.

Table 2-15. Population and Percent Growth – Wheeler Reservoir

Population	County						State
	Lauderdale	Lawrence	Limestone	Madison	Marshall	Morgan	Alabama
Population (2020 - Projection)	92,221	32,432	99,775	372,447	95,958	119,223	4,958,548
Population (2015 - Estimate)	92,596	33,115	91,663	353,089	94,725	119,565	4,858,979
Population (2014 – Estimate)	92,780	33,835	87,167	343,229	94,121	119,744	4,817,678
Population (2010)	92,709	34,339	82,782	334,811	93,019	119,490	4,779,736
Projected Growth (2015-2020)	-0.4%	-2.1%	8.8%	5.5%	1.3%	-0.3%	2.0%
Percent Change (2010-2015)	-0.1%	-3.6%	10.7%	5.5%	1.8%	0.1%	1.6%
Percent Change (2010-2014)	0.1%	-1.5%	5.3%	2.5%	1.2%	0.2%	0.8%
Percent Rural (2010)	49.3%	91.3%	57.6%	16.4%	53.3%	38.6%	41.0%

Sources: U.S. Census Bureau (USCB) 2010a and USCB 2015

As presented in Table 2-16, from 2010 to 2014, an average of 5.7 percent of the population was unemployed within the Wheeler Reservoir area. The state of Alabama during that same time period had an unemployment rate of 6 percent. Only Morgan County had an unemployment rate higher than the state of Alabama at 7 percent. Management, Business Science, and Arts was the largest employment sector among all counties within the area. At $43,511, the state of Alabama has a higher median household income than half of the counties within the Wheeler Reservoir area. Madison County has a significantly higher median household income of $58,203 compared to all of the other area counties. The lowest median household income is in Marshall County at $39,473.

Table 2-16. Employment and Income, 2010-2014 – Wheeler Reservoir

Employment and Income	County						State
	Lauderdale	Lawrence	Limestone	Madison	Marshall	Morgan	Alabama
Civilian Employed Population 16 Years and Over	40,047	12,876	36,895	162,126	37,953	52,294	2,010,453
Management and Business Science and Arts	30%	25%	35%	45%	28%	29%	33%
Service Occupations	20%	16%	15%	15%	15%	16%	17%
Sales and Office	25%	20%	22%	23%	22%	24%	24%
Natural Resources, Construction, and Maintenance	11%	15%	11%	7%	14%	12%	10%
Production, Transportation and Material Moving	15%	25%	17%	7%	21%	19%	16%
Percent of Population >16 years Unemployed	5%	6%	5%	6%	5%	7%	6%
Median Household Income	$42,703	$40,356	$49,461	$58,203	$39,473	$45,341	$43,511

Source: USCB 2010b

2.2.14.2 Environmental Justice

EO 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” formally requires Federal agencies to incorporate Environmental Justice as part of NEPA. Specifically, it directs them to address, as appropriate, any disproportionately high and adverse human health or environmental effects of their actions, programs, or policies on minority and low-income. Although TVA is not one of the agencies subject to this order, TVA routinely considers Environmental Justice impacts as part of the project decision-making process.

The minority population within the Wheeler Reservoir area ranges from 17.3 percent in Marshall County to 34.9 percent in Madison County (Table 2-17). Minorities comprise 33.7 percent of the population in the state of Alabama. On average, approximately 16 percent of the population within the area is below the poverty level. Madison County has the lowest poverty rate of 13.4 percent while Marshall County has the highest with 19.9 percent. Comparatively, the state of Alabama has an 18 percent poverty rate.

Table 2-17. Minority Population and Poverty, 2010-2014 – Wheeler Reservoir

Population	County						State
	Lauderdale	Lawrence	Limestone	Madison	Marshall	Morgan	Alabama
Total Population	92,780	33,835	87,167	343,229	94,121	119,744	4,817,678
White Alone[1]	80,695	26,344	70,843	236,921	87,082	99,065	3,327,891
Black or African American Alone[1]	9,228	3,751	11,133	82,307	1,703	14,413	1,269,808
American Indian and Alaska Native Alone[1]	436	1,845	527	2,244	632	915	25,181
Asian Alone[1]	743	40	1,089	8,415	512	746	58,322
Native Hawaiian and Other Pacific Islander Alone[1]	194	0	33	330	7	83	1,430
Two or More Races	1,433	1,802	1,673	9,958	1,594	2,641	76,428
Hispanic or Latino[2]	2,174	663	4,934	15,984	11,830	9,304	191,838
Percent Minority	15.0%	24.0%	22.2%	34.9%	17.3%	23.5%	33.7%
Percent of Population Below Poverty Level	18.7%	17.1%	14.1%	13.4%	19.9%	15.1%	18.9%

[1] Includes persons reporting only one race
[2] Hispanics may be of any race, so also are included in applicable race categories.
Source: USCB 2010b

For more information about socioeconomics and the potential impacts of the draft RLMP, please see Volume I, Section 3.16 of the EIS.

2.3 Major Features of Wheeler Reservoir

2.3.1 Natural Resource Management

Since the impoundment of Wheeler Reservoir, TVA has proactively managed the natural resources on many of the adjacent lands as well as in the reservoir fluctuation zone and embayments. Historically, TVA managed the forests on a majority of these tracts and prescribed forestry management methodologies such as timber stand improvement cuttings, timber salvage as a result of storm damage, prescribed burns (primarily in pine stands), and tree plantings. Additionally, some forest clearings were created to provide additional wildlife habitat. TVA also maintained many miles of forest roads to allow enhanced access to the public for outdoor recreation and to facilitate natural resource management objectives.

TVA has cooperated with the ADCNR to maintain two WMA for waterfowl and small game hunting, farmland protection and crop production, and wildlife management, especially waterfowl management. The Whiteside and Rockhouse dewatering units are under a management agreement with the USFWS as part of the Wheeler National Wildlife Refuge (WNWR). A portion of the Harris-Sweetwater dewatering unit is included in the Swan Creek WMA.

Beginning in the early 1980's and continuing through present, TVA enhanced fish and wildlife habitat along the shorelines and in the fluctuation zone of Wheeler Reservoir by planting bald cypress trees, buttonbush, and other wetland plant species. Some of these plantings were in cooperation with the ADCNR and USFWS. TVA also provided property (Parcel 43) to ADCNR for the operation of a fish hatchery. This hatchery was used to raise game species for introduction into area waters to boost local fish populations. The lands surrounding the hatchery (Parcels 45, 46 and 47) were managed by ADCR as the Buck Island WMA. When the hatchery was closed in the late 1990's, these adjacent parcels were also returned to TVA for management.

Agricultural licenses have been established on several parcels around the reservoir. These licenses allow local farmers to continue agricultural production on historical farm tracts, as well as assist TVA in providing habitats for diverse wildlife populations. TVA has promoted wildlife nesting boxes and platforms for species such as bluebirds, wood ducks, ospreys, and eagles. These efforts have been concentrated in the Flint River management unit plan areas and within the WMAs and WNWR.

In 1998, a resource management unit plan was developed to guide the natural resource management of a large contiguous tract of land in the lower portion of the Flint River watershed. The Lower Flint River management unit plan outlined a scope for 25 years of natural resource management covering such activities as timber management, wildlife habitat enhancements, enforcement, forest road maintenance, and public use management.

TVA has stabilized shoreline areas with severely eroding banks containing archaeological resources and critically eroding island areas. In addition, TVA monitors and protects sensitive species on TVA lands and within the waters of Wheeler Reservoir. Through the years, TVA has also identified and protected unique and/or sensitive lands through the natural areas program. Several of these projects were in partnership with the USFWS and ADCNR.

TVA has increased public access along the Wheeler Reservoir shoreline for boat launching and shoreline fishing. Some of these efforts were in partnership with ADCNR and local governments. Boat ramps, parking lots, courtesy docks, and fishing piers have been constructed at various locations as part of this effort.

2.3.2 Wheeler National Wildlife Refuge

The Wheeler Migratory Waterfowl Refuge was established on July 7, 1938, by Franklin D. Roosevelt, who signed EO 7926. The area was renamed to WNWR on July 25, 1940, by Franklin D. Roosevelt who signed Proclamation No. 2416. The boundaries of the WNWR were adjusted on October 14, 1946, by Harry S. Truman who signed EO 9790. The USFWS manages the WNWR with the following objectives:

- Provide wintering habitat for migratory waterfowl consistent with the overall plan of the Mississippi Flyway Council.
- Provide optimum habitat for a wide diversity of game and nongame birds, both resident and migratory, and for mammals, reptiles, and amphibians.
- Provide optimum habitat and maximum protection for endangered and threatened species.
- Provide compatible wildlife-oriented recreation and interpretive opportunities to the public.

Additional information about WNWR can be found at the USFWS Web site, http://www.fws.gov/wheeler/.

2.3.3 Dewatering Units

TVA operates, in partnership with ADCNR and the USFWS, two dewatering units on Wheeler Reservoir. These areas were developed as part of a long-term approach to mosquito control and were operated primarily for that purpose until the 1970s when TVA began reducing its mosquito control efforts. Additional factors in the design, development, and operation of dewatering units included providing food and habitat for wildlife, protecting bottomland hardwoods, and making land available for farming. As TVA reduced its mosquito control activities, these other benefits began to increase in value. TVA entered into agreements with federal and state agencies for the management and cost sharing of operation and maintenance

of these areas. The continued operation of the dewatering units provides environmental and economic benefits to the region.

2.3.3.1 Rockhouse Dewatering Unit

The Rockhouse Dewatering Unit is considered part of the WNWR and is managed cooperatively by TVA and the USFWS. The Rockhouse Dewatering Unit consists of 1,150 acres; two pumps with a total pumping capacity of 70,000 gallons per minute; 21,000 linear feet of levees; and numerous internal drainage ditches. The dewatering unit is managed for wildlife and waterfowl benefits.

2.3.3.2 Whiteside Dewatering Unit

The Whiteside Dewatering Unit is located within the Swann Creek WMA and is managed cooperatively with ADCNR. The dewatering unit is managed for wildlife and waterfowl benefits. There is approximately 39,700 linear feet of levees (36,800 feet of external levee and 2,900 feet internal levees), a pump house, and a network of internal drainage ditches or canals.

2.3.4 Joe Wheeler State Park

In 1952, TVA transferred approximately 930 acres to the state of Alabama to assist in the establishment of Joe Wheeler State Park. Now, the park spans across both banks of the Tennessee River; includes large portions of First Creek and Second Creek; and property along Elk River. Joe Wheeler State Park continues to be a recreational attraction in northwest Alabama with amenities including a resort lodge, lakeside cottages, cabins, group lodge, camping, and a restaurant. The park is part of the Alabama Bass Trail and offers additional recreation activities such as a beach, boat rentals, golf course, marina, picnic area, trails, and transient boat slips. Additional information about Joe Wheeler State Park can be found the Alabama State Park's Web site, http://www.alapark.com/JoeWheeler/.

2.3.5 Trail of Tears National Historic Trail

Trail of Tears National Historic Trail was designated by the U.S. National Park Service (USNPS) to commemorate the 1838 historic passage of thousands of removed Indians from their homelands in the Southeast to Indian Territory in the West to what is now Oklahoma. Many people perished during this journey. There are land and water components of the trail crossing through north Alabama. The Trail's overland portion was reconstructed from historical research and some field verification; therefore TVA may not know the exact locations of overland

portions. The water component used to canoe spans the length of the Tennessee River from Guntersville Dam Reservation to Wheeler Dam Reservation. The land component of the trail may cross TVA property near Decatur, Alabama on Wheeler Reservoir.

2.3.6 Cultural Resource Management

Human occupation of northern Alabama has occurred from the Paleo-Indian to the Historic Periods. In northern Alabama, prehistoric archaeological chronology is generally broken into five broad time periods: Paleo-Indian, Archaic, Gulf Formational, Woodland, and Mississippian. Prehistoric land use and settlement patterns vary during each period, but short- and long-term habitation sites are generally located on floodplains and alluvial terraces along rivers and tributaries. Specialized campsites tend to be located on older alluvial terraces and in the uplands. European interactions with Native Americans associated with the fur trading industry in this area began in the 17th and 18th centuries. The first permanent occupation of northern Alabama by Europeans, Euro-Americans, and African Americans occurred in the late 18th century. Various excursions and temporary settlements by the British, French, and Spanish occurred prior to this period. From the 1840s to the mid-20th century, north Alabama was a major cotton-growing area. Settlement and land use of the area remained primarily rural until the mid-20th century, at which time industry and urbanization increased. Numerous archaeological sites associated with these occupations have been identified within the Wheeler watershed.

2.4 The Future Management of Reservoir Lands

Varying types of land management or conservation techniques coupled with development could occur along Wheeler Reservoir. The implementation of the NRP would drive the types of programs conducted on TVA lands set aside due to natural or sensitive resources. Business opportunity, overall economy, local incentives, and community planning practices are factors that could contribute to the types of industry locating or expanding along the reservoir. Recreation demand is driven by population levels, recreation participation rates, changing preferences for different types of recreation, and innovations in recreation equipment. Residential development is often times opportunistic; however, the lands set aside for such use are based on the types of property rights conveyed by TVA upon sale of the property. The TVA lands managed by other federal, state, or local agencies would most likely continue to do so in a similar manner.

CHAPTER 3. LAND PLANNING PROCESS

3.1 Process for Planning Land

The reservoir land management planning process involves allocation of reservoir land to seven defined land use zones, six of which are comprised of property owned by TVA in fee. The term "land use zone" refers to a descriptive set of criteria given to distinct areas of land based on location, features, and characteristics. The land use zone definitions listed in Table 3−1 are identical to those listed in the NRP. The definition of a land use zone provides a clear statement of how TVA will manage public land, and allocation of a parcel to a particular land use zone identifies that land for specific uses. Implementation of an RLMP minimizes conflicting land uses and makes it easier to handle requests for use of public land.

This draft RLMP was developed by a team of land managers and technical experts from TVA, knowledgeable about the reservoir and its resources. The planning team made land use decisions by integrating public needs, environmental conditions, economic benefits, state and federal policies, and the original congressional intent of the Wheeler Reservoir project. The process includes information from resource data, computer analysis, the public, other agencies, and knowledgeable TVA staff. This draft RLMP is consistent with the strategic direction of the NRP and the objections of the CVLP. Furthermore, the categorization and management of TVA-owned shoreline access land along Wheeler Reservoir tiers from the SMI EIS (TVA 1999).

The planning process is completed once TVA conducts an environmental review of the draft RLMP as well as reasonable alternatives, in compliance with NEPA. This process allows the public and intergovernmental partners to review TVA's proposed allocations and provide input.

Table 3-1. Land Use Zone Definitions

Zone	Definition
Zone 1 Non−TVA Shoreland	Shoreland that TVA does not own in fee. This land may be privately owned or owned by a governmental entity other than TVA. Uses of this non−TVA land may include residential, industrial, commercial, and/or agricultural. In many instances, TVA may have purchased the right to flood and/or limit structures on this non−TVA land (i.e., flowage easement). TVA's permitting authority under Section 26a of the TVA Act applies to construction of structures on non−TVA shoreland. Non−TVA shoreland allocations are based on deeded rights and, therefore, will not change as a result of the lands planning process. This category is provided to assist in comprehensive evaluation of potential environmental impacts of TVA's allocation decision.

Zone	Definition
Zone 2 Project Operations	Land currently used, or planned for future use, for TVA operations and public works projects, including: • Land adjacent to established navigation operations — Locks, lock operations and maintenance facilities, and the navigation work boat dock and bases. • Land used for TVA power projects operations — Generation facilities, switchyards, and transmission facilities and rights−of−way. • Dam reservation land — Areas acquired and managed for the primary purpose of supporting the operation and maintenance of TVA dams and associated infrastructure; secondary uses may also include developed and dispersed recreation, maintenance facilities, miscellaneous TVA field offices, research areas, and visitor centers. • Navigation safety harbors/landings — Areas used for tying off commercial barge tows and recreational boats during adverse weather conditions or equipment malfunctions. • Navigation dayboards and beacons — Areas with structures placed on the shoreline to facilitate navigation. • Public works projects — Includes rights−of−way for public utility infrastructure, such as sewer lines, water lines, transmission lines, and major highway projects.
Zone 3 Sensitive Resource Management	Land managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment. Recreational natural resource activities, such as hunting, wildlife observation, and camping on undeveloped sites, may occur in this zone, but the overriding focus is protecting and enhancing the sensitive resource the site supports. Areas included are: • TVA−designated sites with potentially significant archaeological resources. • TVA public land with sites/structures listed in or eligible for listing in the National Register of Historic Places**.** • Wetlands — Aquatic bed, emergent, forested, and scrub-shrub wetlands as defined by TVA. • TVA public land under easement, lease, or license to other agencies/individuals for resource protection purposes. • TVA public land fronting land owned by other agencies/individuals for resource protection purposes. • Habitat protection areas — These TVA natural areas are managed to protect populations of species identified as threatened or endangered by the U.S. Fish and Wildlife Service, state-listed species, and any unusual or exemplary biological communities/geological features. • Ecological study areas — These TVA natural areas are designated as suitable for ecological research and environmental education by a recognized authority or agency. They typically contain plant or animal populations of scientific interest or are of interest to an educational institution that would utilize the area. • Small wild areas — These TVA natural areas are managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural, scenic, or aesthetic qualities that can also support dispersed, low-impact types of outdoor recreation.

Zone	Definition
	• River corridor with sensitive resources present — A river corridor is a segment of a river and the adjacent land along the banks. River corridors often consist of a linear green space of TVA land serving as a buffer to tributary rivers entering a reservoir. These areas will be included in Zone 3 when identified sensitive resources are present. • Significant scenic areas — Areas designated for visual protection because of their unique vistas or particularly scenic qualities. • Champion tree site — Areas designated by TVA as sites that contain the largest known individual tree of its species in that state. The state forestry agency "Champion Tree Program" designates the tree, while TVA designates the area of the sites for those located on TVA public land. • Other sensitive ecological areas — Examples of these areas include heron rookeries, uncommon plant and animal communities, and unique cave or karst formations.
Zone 4 Natural Resource Conservation	Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Areas included are: • TVA public land managed for wildlife or forest management projects. • TVA public land under easement, lease, or license to other agencies for wildlife or forest management purposes. • TVA public land fronting land owned by other agencies for wildlife or forest management purposes. • Dispersed recreation areas maintained for passive, dispersed recreation activities, such as hunting, hiking, bird watching, photography, primitive camping, bank fishing, and picnicking. • Shoreline conservation areas — Narrow riparian strips of vegetation between the water's edge and TVA's back-lying property that are managed for wildlife, water quality, or visual qualities. • Wildlife observation areas — TVA natural areas with unique concentrations of easily observed wildlife that are managed as public wildlife observation areas. • River corridor without known sensitive resources present — A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. River corridors will be included in Zone 4 unless sensitive resources are present (see Zone 3). • Islands where sensitive resources are not known to be present or support existing development.
Zone 5 Industrial	Land currently used, or planned for future use, for economic development, including businesses in distribution/processing/assembly and manufacturing. Preference will be given for businesses requiring water access. There are two primary types of uses for TVA land allocated for Industrial: (1) access for water supply or structures associated with navigation such as barge terminals, mooring cells, etc., or (2) land−based development potential. Areas included are: • TVA public land under easement, lease, or license to other agencies/individuals/ entities for industrial purposes. • TVA public land fronting land owned by other agencies/individuals/entities for industrial purposes.

Zone	Definition
	In some cases, TVA land allocated to industrial use would be declared surplus and sold at public auction. Types of development that can occur on this land are: • Industry — Manufacturing, fabrication, and distribution/processing/assembly involving chemical, electronics, metalworking, plastics, telecommunications, transportation, and other industries. Industry does not include retail or service−based businesses. • Industrial access — Access to the waterfront by back-lying property owners across TVA property for water intakes, wastewater discharge, or conveyance of commodities (i.e., pipelines, rail, or road). Barge terminals are associated with industrial access corridors. • Barge terminal sites — Public or private facilities used for the transfer, loading, and unloading of commodities between barges and trucks, trains, storage areas, or industrial plants. • Fleeting areas — Sites used by the towing industry to switch barges between tows or barge terminals that have both offshore and onshore facilities. • Minor commercial landing — A temporary or intermittent activity that takes place without permanent improvements to the property. These sites can be used for transferring pulpwood, sand, gravel, and other natural resource commodities between barges and trucks.
Zone 6 Developed Recreation	Land currently used, or planned for future use, for concentrated, active recreational activities that require capital improvement and maintenance of developed infrastructure, including: • TVA public land developed for recreational purposes, such as campgrounds, day use areas, etc. • TVA public land under easement, lease, or license to other agencies/individuals/entities for developed recreational purposes. • TVA public land fronting land owned by other agencies/individuals/entities for developed recreational purposes. Residential use, long-term accommodations, and/or individually owned units are not permitted on land allocated for developed recreation. Types of development that can occur on this land are: • Public recreation — Recreation amenities developed and owned by a public agency that are open to the public. Public recreation areas may have varying levels of development, ranging from a water access site (e.g., launching ramp) to a marina facility. Facilities at public recreation areas could include playgrounds/play structures, picnic facilities, tennis courts, horseshoe areas, play courts, recreation centers, trails, greenways, natural areas, amphitheaters, food concessions (vending, snack bar), access to water for fishing and boating, swimming areas and swimming pools, launching ramps, courtesy piers, canoe access, marina facilities owned by the public entity, parking, and campgrounds. Cabins or other overnight accommodations (other than campgrounds) are only permitted if the public recreation area is operated by a state or state agency as a component of a state park system. • Public recreation areas and facilities are typically owned and operated by the federal, state, county, or local government. However, private entities may operate recreation facilities on public recreation land as concessionaires under agreement with the public entity controlling the

Zone	Definition
	property. The use of the facilities may be offered free or for a fee. Time−forward, public−private partnerships where facilities are owned by private investors will not be approved on public recreation land. All structures and facilities should be owned by the public entity. • Commercial recreation — Recreation amenities that are provided for a fee to the public intending to produce a profit for the private owner/operator. These primarily water-based facilities typically include marinas and affiliated support facilities such as stores, restaurants, campgrounds, and cabins and lodges. Where applicable, TVA will require appropriate compensation for the commercial use of the property.
Zone 7 Shoreline Access	TVA-owned land where Section 26a applications and other land use approvals for residential shoreline alterations are considered in accordance with TVA's Shoreline Management Policy. Types of development/management that may be permitted on this land are: • Residential water use facilities, e.g., docks, piers, launching ramps/driveways, marine railways, boathouses, enclosed storage space, and nonpotable water intakes. • Shoreline access corridors, e.g., pathways, wooden steps, walkways, or mulched paths that can include portable picnic tables and utility lines. • Shoreline stabilization, e.g., bioengineering, riprap, gabions, and retaining walls. • Shoreline vegetation management.

Prior to proposing parcel allocations, the TVA planning team reviewed the characteristics of each parcel (i.e., location and existing conditions). TVA also reviewed deeds of land previously sold to private entities to identify existing shoreline access rights. In addition, the planning team reviewed existing commitments associated with long-term contractual agreements—that is, existing leases and easements. The planning team determined the need for field reviews for uncommitted parcels based on data from the TVA Natural Heritage database; the planning team then conducted field reviews on a portion of the TVA natural areas. Land with identified sensitive resources was proposed to be placed in Zone 3 (Sensitive Resource Management). The planning team then made proposed allocations for the remaining parcels based on reservoir planning objectives and public input and compiled those allocations into the draft RLMP. When developing the draft RLMPs, the planning team identified proposed allocations of reservoir parcels to one of seven planning zones using the zone definitions listed above.

In the draft RLMP, TVA proposes to allocate land currently committed to a specific use compatible with that use unless there is an overriding need to change the use. Some committed land uses are determined by the covenants and provisions of easements, sale, and/or transfer agreements. Committed lands include the following: properties where TVA has granted

landrights (easements, leases, etc.) for specific uses, properties where TVA has previously identified resources in need of protection, Project Operations lands (transmission lines, dam reservations, public infrastructure, etc.), and lands fronting wildlife management areas. Possible reasons to change a committed land use would be to prevent or remedy ongoing adverse impacts resulting from the actions of a license or easement holder.

Approximately 22,455 acres (62 percent) of the TVA land surrounding Wheeler Reservoir are committed due to existing agreements, TVA operations or other public infrastructure projects. Agricultural licenses are not considered as committed uses because they are an interim use of TVA land.

Approximately 13,605 acres (38 percent) of the TVA land surrounding Wheeler Reservoir are uncommitted. Technical specialists collected field data on many uncommitted parcels to identify areas containing sensitive resources. Representatives from various TVA organizations met to propose how these uncommitted lands should be allocated into the seven planning zones. The location of known and potentially sensitive resources was used in determining the capability and suitability of potential uses for each parcel of land.

3.2 Wheeler Reservoir Goals and Objectives

The NRP established long-term land planning goals and objectives. While these goals and objectives were established to guide planning decisions across the Valley, these same goals and objectives can be applied when planning specific reservoirs.

Goal

TVA will strive to continue to balance shoreline development, recreational use, sensitive and natural resource management, industrial use and other land uses in a way that maintains the quality of life and other important values across the region.

Objectives

Apply a systematic method of evaluating and identifying the most suitable uses of TVA public lands using resource data, stakeholder input, suitability and capability analyses, and TVA staff input.

- Identify land use zone allocations to optimize public benefit and balance competing demands for the use of public lands.

- Identify land use zone allocations to support TVA's broad regional resource development mission. TVA reservoir properties are managed to provide multiple public benefits, including recreation, conservation, and economic development.
- Provide a clear process by which TVA will respond to requests for use of TVA public land.
- Comply with federal regulations and executive orders.
- Enhance the protection of significant resources, including threatened and endangered species, cultural resources, wetlands, unique habitats, natural areas, water quality, and the visual character of the reservoir.
- Provide a mechanism that allows local, state, and federal infrastructure projects when the use is compatible with the zone allocation.

3.3 Parcel Allocations

TVA's land planning process (Section 3.1) along with the goals and objectives specific to Wheeler Reservoir (Section 3.2) were used to develop this draft RLMP. Through this process, TVA proposes allocations of each reservoir parcel to one of the seven planning zones as indicated in Table 3−2.

Table 3-2. Summary of Proposed Land Use Allocations for the Draft Wheeler Reservoir Land Management Plan (Alternative B)

Allocation Designation		Number of Parcels	Acres
Zone 2	Project Operations	39	4,813.5
Zone 3	Sensitive Resource Management	42	3,656.2
Zone 4	Natural Resource Conservation	60	25,224.2
Zone 5	Industrial	15	895.6
Zone 6	Developed Recreation	35	1,312.1
Zone 7	Shoreline Access	15	143.6
Total		**206**	**36,045.2**

Figure 3-1 represents the percent of land acreage on Wheeler Reservoir that is allocated to each land use zone. A detailed description of each zone and the identification of the land zoned by each category is presented below.

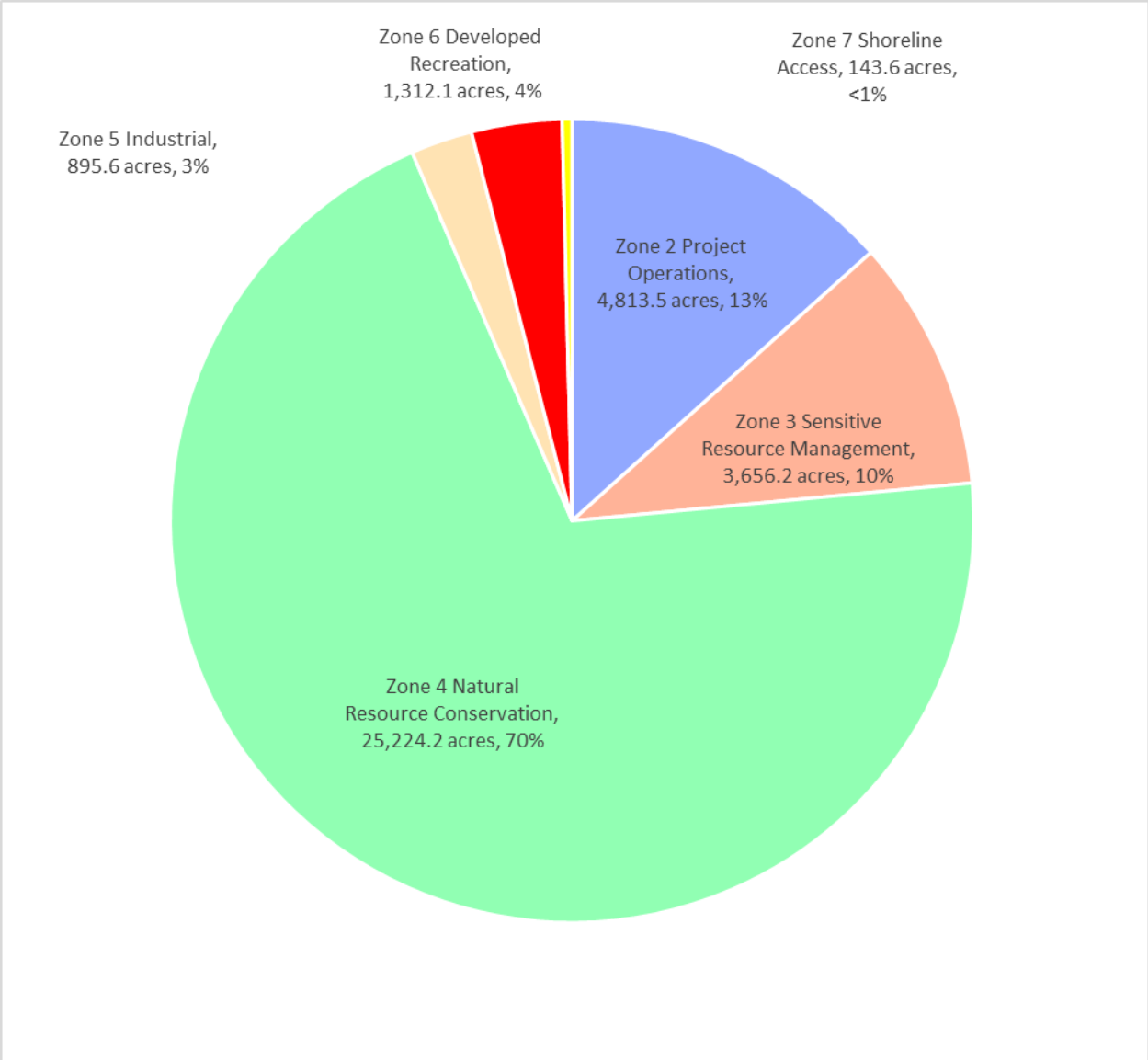


Figure 3-1. Percent of Wheeler Reservoir Acreage Allocated by Zone

- Zone 2 (Project Operations). Zone 2 encompasses all TVA land currently used for TVA operations and public works projects. In the draft RLMP, TVA proposes to allocate 4,813.5 acres to Zone 2 (Project Operations). The largest parcel that would be allocated as Zone 2 is 4,070 acres allotted for Redstone Arsenal for the use of lands by the U.S. Department of Defense for the creation and future operation of the arsenal. Other TVA land that would be allocated to this zone includes the parcel that contains the Wheeler Dam Reservation which includes the dam powerhouse and associated access roads, transmission lines and substations; navigation lock and associated access roads and mooring cells; roads; highway; boat launching ramp; and loading dock. The Wheeler

Dam is a historically significant structure and is eligible for listing on the National Register of Historic Places.

- Zone 3 (Sensitive Resource Management). Zone 3 lands are managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment. Approximately 10 percent (3,656.2 acres) of the TVA land on Wheeler Reservoir would be allocated to Zone 3 under the draft RLMP. The parcels included in this allocation represent areas where high-quality wetland habitat, wildlife habitat, scenic buffers, or cultural and historic resources are present. The largest parcels that would be allocated to Zone 3 are Parcels 137 and 161. Land cover on these parcels consists of a diversity of forest types and wetlands which support a variety of wildlife, including game and nongame species.

- Zone 4 (Natural Resource Conservation). Lands allocated to Zone 4 are managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Approximately 70 percent of the TVA owned land on Wheeler Reservoir would be allocated to Zone 4 (25,224.2 acres). The largest parcel allocated as Zone 4 is Parcel 88 which is the Wheeler National Wildlife Refuge (WNWR) managed by the USFWS and was established as a refuge and wildlife management area for migratory birds and other wildlife. Other large parcels that would be allocated to this zone include Parcel 81, which is managed by ADCNR as the Swan Creek wildlife management area (WMA).

- Zone 5 (Industrial). Zone 5 lands are managed for economic development including businesses in distribution/processing/assembly and light manufacturing. Approximately 3 percent of the TVA land on Wheeler Reservoir (895.6 acres) would be allocated as Zone 5. Most of these parcels are areas that currently support industrial uses or areas suitable for industrial development. For example, Parcel 204 is a large parcel where interest in potential industrial development has been expressed. An environmental review tailored to the proposed development would occur prior to any ground disturbing activities on any previously undeveloped sites that would be allocated to Zone 5.

- Zone 6 (Developed Recreation). Zone 6 lands are currently used or planned for recreational purposes, such as public launching ramps or parks. For example, Parcel 171 comprises the 420.7 acre Point Mallard Park City managed by the city of Decatur, Alabama, for public recreation. Approximately 4 percent (1,312.1 acres) of TVA-owned land around Wheeler Reservoir would be allocated to Developed Recreation.

- Zone 7 (Shoreline Access). Zone 7 lands are TVA-owned lands where Section 26a applications and other land use approvals for private shoreline alterations are considered. A very small amount of TVA land on this reservoir would be allocated to Zone 7. Requests for private shoreline alterations would be considered on parcels identified in this zone where such use was previously considered, and/or where the back-lying landowner possesses deeded rights of access, and where the proposed use would not conflict with the interests of the public.

The proposed allocations vary somewhat from the estimates for Wheeler Reservoir that TVA made when completing its CVLP in 2011. At that time, TVA anticipated that some parcels of land may be better allocated to different land use zones than those initially identified. As discussed in the Volume I of the EIS, TVA proposes to update the CVLP target ranges to incorporate the eight proposed RLMPs addressed in this EIS. Table 3–3 compares the proposed RLMP allocations and the 2011 CVLP estimates for Wheeler Reservoir.

Table 3-3. Draft Wheeler Reservoir Land Management Plan (Alternative B) and 2011 Comprehensive Valleywide Land Plan Comparison

Allocation Designation		Draft Wheeler Reservoir Land Management Plan	2011 Comprehensive Valleywide Land Plan
Zone 2	Project Operations	13%	4%
Zone 3	Sensitive Resource Management	10%	24%
Zone 4	Natural Resource Conservation	70%	65%
Zone 5	Industrial	3%	2%
Zone 6	Developed Recreation	4%	8%
Zone 7	Shoreline Access	<1%	<1%

For the following reasons, TVA would allocated a greater number of lands to all land use zones in this draft RLMP except Zone 3 (Sensitive Resource Management) and Zone 6 (Developed Recreation). Fewer acres would be allocated to Zone 3 (Sensitive Resource Management) and

Zone 6 (Developed Recreation) than estimated in the 2011 CVLP. These lands would be placed into the more appropriate designations discussed below.

Zone 2 (Project Operations)

TVA has a great number of transmission lines that cross reservoir property surrounding Wheeler Reservoir. In addition, there are large number of highways and local roads located on TVA lands with easements to the appropriate managing agency. The 2011 CVLP underestimated the amount of lands encumbered with roadways resulting in an increase of lands allocated to Zone 2 during development of the draft RLMP.

Zone 3 (Sensitive Resource Management)

The greatest change from the 2011 CVLP and this draft RLMP occurs within the Zone 3 (Sensitive Resource Management) designation, in part because TVA obtained additional information on federally and state-listed species and significant cultural resources during this planning effort. During the development of the 2011 CVLP, a greater number of lands were placed in the Zone 3 category based mainly on the premise that habitat for listed species and cultural resources could be present. However, a detailed review of the TVA Natural Heritage database and the associated land cover occurred during the planning effort. The results showed that fewer listed species had been recorded and the associated habitat features were not present as originally thought. Likewise, additional cultural resources surveys and historical data were gathered for the planning effort which resulted in fewer lands being proposed for designation as Zone 3 parcels.

Zone 4 (Natural Resource Conservation)

TVA proposes to allocate a greater number of lands to the Zone 4 category. These lands were previously allocated for Zone 3 (Sensitive Resource Management) or Zone 6 (Developed Recreation) in the 2011 CVLP.

Zone 5 (Industrial)

After reviewing the availability of public infrastructure and the presence of sensitive resources, TVA proposes to allocate one large and one mid-sized tract of land for future industrial use resulting in the increase to Zone 5 category.

Zone 6 (Developed Recreation)

The 2011 CVLP overestimated the need for Developed Recreation along Wheeler Reservoir. The planning team reviewed recreational trends coupled with impacts from recent economic changes across the Valley and proposes to allocate fewer lands placed in the Zone 6 category based on their analysis.

Zone 7 (Shoreline Access)

The 2011 CVLP correctly estimated the amount of former TVA property encumbered with shoreline access rights.

Of the 36,045.2 acres on Wheeler Reservoir, there are no proposed allocation changes to 28,940.0 acres (80.3 percent); all proposed allocation changes involve 7,105.2 acres (19.7 percent). Of the 7,105.2 acres, TVA would allocate 2,009.7 acres (28.3 percent) to reflect existing land use agreements or commitments. The remaining 5,095.5 acres (71.7 percent) involve proposed parcel allocations that are not based on existing land use agreements or commitments. See Appendix B for parcel allocation description tables.

3.4 Property Administration

As stewards of public land, TVA uses the RLMP, along with TVA policies and guidelines, to manage resources and to respond to requests for the use of TVA land. All inquiries about or requests for the use of TVA land should be made to the TVA Public Land Information Center at 800-TVA-LAND or 800-882-5263 between 8 a.m. and 6 p.m. Eastern time Monday through Friday.

Pursuant to the TVA Land Policy, TVA would consider changing a land use designation outside of the normal planning process only for the purpose of water access for industrial or commercial recreational operations on privately owned back-lying land or to implement TVA's Shoreline Management Policy.

Additionally, there are a small number of TVA parcels along Wheeler Reservoir over which the upland property owners have deeded access rights that would support a Shoreline Access classification for the TVA land, but the private owners currently are using their upland property for non-residential uses such as commercial, industrial, or developed recreation activities. TVA has zoned these parcels according to the current uses of the upland properties. However, consistent with TVA's Shoreline Management Policy, TVA would, subject to appropriate

environmental review, consider requests to revise the allocations of these parcels to Zone 7 (Shoreline Access) in the event the use of the upland property changes to residential.

Consistent with the TVA Land Policy, those parcels or portions of parcels that have become fragmented from the reservoir may be declared surplus and sold at public auction. Public works/utility projects, such as easements for pipelines, power or communication wires, roads, or other public infrastructure, proposed on TVA land that would not substantially change the zoned land use or adversely impact sensitive resources would not require an allocation change as long as such projects would be compatible with the use of the allocated zone. Proposed public works/utility projects would be subject to a project–specific environmental review. Any other requests involving a departure from the planned uses would require appropriate approval. Proposals consistent with TVA's policies and the allocated use, and otherwise acceptable to TVA, will be reviewed in accordance with NEPA and must conform to the requirements of other applicable environmental regulations and other legal authorities.

This page intentionally left blank

CHAPTER 4. PARCEL DESCRIPTIONS

This chapter describes the proposed land use determined to be most suitable for each parcel of TVA land as shown on the plan maps (Appendix A, Panels 1-15). The parcel descriptions include the acreage rounded to the nearest tenth and the planned land use. Relevant data regarding the proposed land use are provided for each tract and include existing land uses, physical characteristics of the land, presence of existing private water use facilities, and any special considerations related to the future use. All existing private water use facilities with TVA permits are grandfathered, provided they are constructed in accordance with the plans approved by TVA.

Parcel 1 − (128.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

Wheeler Dam Reservation is on this parcel and receives heavy informal public use. Existing facility development includes the dam powerhouse and associated access roads, transmission lines and substations; navigation lock and associated access roads and mooring cells; roads; highway; boat launching ramp; and loading dock. Alabama State Route (SR) 101, which travels through rural Lawrence and Lauderdale counties, is located on this parcel and runs along the top of Wheeler Dam. Because this tract contains the Wheeler Dam reservation, it is also considered historically significant. Wheeler Dam is a historically significant structure and eligible for listing on the NRHP, and undisturbed areas have a moderate probability for subsurface cultural resources. Requests for private water use facilities would not be considered.

Table 4−1. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale and Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	53−SW
TVA D−Stage Map Numbers	157 and 160
Stream Mile and Bank	Tennessee River miles 274 to 275B
Land Use/Land Cover	Mixture of deciduous forest, roads, and water control structures
Known Dispersed Recreation Opportunities	Bank fishing

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Permanent easement to Lauderdale County, Alabama for a roadway • Permanent easement for Lawrence County, Alabama for a roadway • Revocable license to Alabama Department of Conservation and Natural Resources for a park • Revocable license to Bubba's Marine Construction for a barge terminal • Revocable license to East Lauderdale County Water and Fire Protection Authority for water utilities • Revocable license to Joe Wheeler Electric Membership Corporation for electric utilities • Revocable license to U.S. Army Corps of Engineers for a storage building
Potential Projects	Placement on the National Register of Historic Places
Potential Partners	None Identified

Parcel 2 − (22.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Second Creek at the confluence of the Tennessee River. It is encumbered by revocable license agreement to Lauderdale County, Alabama for public recreation. Amenities include campground with a dump station, bathhouse, restroom building, and fishing pier. The parcel is mostly forested with access by paved road from Alabama SR 101. Two navigation mooring cells front the tract and are periodically used by towboats locking through Wheeler Dam. This parcel has a moderate probability for the presence of cultural resources, but it has not been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−2. Parcel Information

Location Component	Parcel Specific Information
County, State	Lauderdale, Alabama
TVA D−Stage Map Numbers	10 and 160
Stream Mile and Bank	Tennessee River mile 275R

Parcel 3 − (174.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel fronts the Joe Wheeler State Parcel and stretches along First Creek, Second Creek, and the Tennessee River. This parcel follows the 560-foot msl contour and adjoins former TVA property (Tract No. XTWR-63) transferred to the State of Alabama. This resort level State Park includes: full service marina, boat ramps, courtesy docks, golf course, restaurant, lodge, cabins campground, swimming pool, beach, trails picnic areas, restrooms and bathhouses. Additional information about Joe Wheeler State Park can be found on the state of Alabama's Web site, http://www.alapark.com/JoeWheeler/. There is a moderate probability for the presence of cultural resources. There is an active gray bat summer cave on this parcel. Small numbers of tricolored bats also use this cave in winter. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−3. Parcel Information

Location Component	Parcel Specific Information
County, State	Lauderdale, Alabama
TVA D−Stage Map Numbers	159, 160, and 163
Stream Mile and Bank	• First Creek Miles 0−3B • Second Creek Miles 0−3.3B • Tennessee River miles 275.3−278.9R

Parcel 4 − (8.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel includes one navigation light and two safety harbors. A safety harbor is located along the left descending bank of Second Creek at the confluence of the Tennessee River, and a TVA transmission line crosses the parcel. The Second Creek navigation light is located at Tennessee River mile 275.6R, and the other safety harbor is located along the right descending bank of First Creek at the confluence of the Tennessee River. The safety harbors are available for barges and recreational boats during adverse weather conditions or equipment malfunction. Future development of this tract will be restricted, and there is a low probability for cultural resources. Requests for private water use facilities would not be considered.

Table 4−4. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	53−SE
TVA D−Stage Map Numbers	160
Stream Mile and Bank	Tennessee River miles 275.4, 275.6, and 277.1R
Land Use/Land Cover	deciduous forest and grassland
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None Identified
Potential Partners	Alabama Department of Natural Resources

Parcel 5 − (11.2 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

Prior to impoundment, the road providing access to this parcel (Lambs Ferry Road) was an early ferry crossing. The actual approach and crossing are now inundated and could be interpreted with a sign. The parcel is covered by a loblolly pine plantation, and scrub-shrub wetlands are located within the small inlet. Because of the shallow nature of the lake fronting this parcel, submersed aquatic plant beds are present during some years.

The shoreline has a gentle slope to the water and was historically used by sport fishermen to launch small fishing boats. A preliminary survey of water depths at the end of the round found that the water depth was too shallow to improve lake access. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−5. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	53−SE
TVA D−Stage Map Numbers	164
Stream Mile and Bank	Tennessee River mile 280.3R
Land Use/Land Cover	Mixed forest with primarily loblolly pine; forested and scrub-shrub wetland

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 6 − (8.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

The previous RLMP stated that approximately 95 percent of the tract as prime farmland. The parcel is covered with a mixed hardwood and pine forest. Current access is provided by a dirt road located west of the TVA tract. TVA formerly purchased a legal right-of-way (ROW) for ingress and egress to this tract. No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−6. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	53−SE
TVA D−Stage Map Numbers	165
Stream Mile and Bank	Tennessee River mile 281.5R
Land Use/Land Cover	Mixed hardwood and pine forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 7 − (21.5 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This tract is composed of two island parcels, one large, approximately 21 acres, and a smaller parcel approximately 0.3 acre in size. The islands were combined because of their proximity and land characteristics.

Soil interpretation of both islands revealed them to be 100 percent prime farmland. The larger island supports mixed hardwood and loblolly pine forest. Historically, scrub-shrub wetlands were widespread along the northern edge of the larger island. Both islands offer excellent wildlife habitat for migratory birds as resting and feeding areas. Even though the islands are relatively close to a developed residential shoreline, human contact with this habitat is infrequent. This embayment is a prime spawning habitat and as a fisheries nursery area for largemouth bass and sunfish. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−7. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	53–SE
TVA D−Stage Map Numbers	165
Stream Mile and Bank	Tennessee River mile 282R
Land Use/Land Cover	Mixed hardwood/pine forest dominated with loblolly pine; scrub-shrub wetlands historically widespread along northern edge of island
Known Dispersed Recreation Opportunities	Hunting, fishing, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Continue efforts to reestablish and protect wetland communities along the northern portion of island • Systematic survey for historic properties
Potential Partners	Adjacent private property owners

Parcel 8 − (4.4 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This tract is composed of two island parcels, one large (approximately 4 acres) and one small (approximately 0.1 acre). The islands were combined as one tract because of significant cultural resources and documented historical events which took place prior to impoundment of the reservoir. The Chickasaws established a major village at the mouth of the Elk River in the 18th century to establish an eastern boundary against Cherokee advances. The Village remained until about 1817 when the Chickasaws lost this land through treaties which allowed White settlement. Both tracts will help provide visual buffers against approaching residential development. The larger island is densely covered with mixed pine and hardwood trees. During lower pool elevations the smaller parcel becomes a peninsula. Both parcels are within the 100-year flood elevation. The islands also provide protection for wintering gulls, as well as a feeding and resting habitat for migratory diving ducks. Sport fishing for largemouth bass is also highlighted at this location. Numerous federally and state-listed mussel species were present at the mouth of the Elk River prior to impoundment, but no existing populations are currently known. No existing shoreline improvements are currently present, and future requests for private shoreline alterations would not be considered.

Table 4−8. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	53–SE
TVA D−Stage Map Numbers	165
Stream Mile and Bank	Tennessee River mile 284.3R
Land Use/Land Cover	Hardwood forest with sparse understory
Known Dispersed Recreation Opportunities	Fishing and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Continue efforts to prevent the reestablishment of feral animals on the island • Establishment of desired understory plants • Systematic survey for historic properties
Potential Partners	None identified

Parcel 9 − (1.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located between Dell's Vista and Twin Rivers subdivisions and along the right descending bank of the Elk River near its confluence with the Tennessee River. The area has been improved with an access road, parking lot and boat ramp. This parcel has a low probability for the presence of cultural resources, but it has not been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−9. Parcel Information

Location Component	Parcel Specific Information
County, State	Lauderdale, Alabama
TVA D−Stage Map Numbers	165
Stream Mile and Bank	Elk River mile 0.5R

Parcel 10 − (9.2 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Elk River. The tract extends between TVA markers 165−161A to 164−187A. This parcel lies entirely below the 560-foot msl, and the current land use is deciduous forest and maintained lawns. There is a cave with two records of federally listed bat species on this parcel. However, this cave is under water and no longer supports bats. Hidden Valley Shores and Twin Rivers Estates subdivisions are located on the back-lying private property. TVA acquisition maps and cemetery database indicate the presence of the Watkins cemetery also located on the back-lying property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4−10. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	53−SE
TVA D−Stage Map Numbers	164 and 165
Stream Mile and Bank	Elk River mile 1R
Land Use/Land Cover	Deciduous forest and maintained lawns

Location Component and Public Involvement Opportunities	Parcel Specific Information
Fronts Former TVA Tract (s)	XWR−438, XWR−439, and XWR−440
Structure Profile	560-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 11 − (91.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located on the right bank of the Elk River and is currently used for dispersed recreation activities. Its access and topography make it suitable for a variety of developed recreational facilities and activities. The land cover is dominated by upland mixed hardwood forest, eastern broadleaf deciduous forest, and palustrine forest along the creek beds. Additionally, 5.2 acres of wetlands have been delineated on the parcel. This parcel has a low probability for the presence of cultural resources. This parcel has been surveyed for historic properties. Two historic archaeological sites were identified, but both are not eligible for the National Register of Historic Places.

This parcel was the subject of an environmental assessment, and additional information about the parcel can be found on TVA's Web page, http://www.tva.gov/environment/reports/elkriver/index.htm. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−11. Parcel Information

Location Component	Parcel Specific Information
County, State	Lauderdale, Alabama
TVA D−Stage Map Numbers	165
Stream Mile and Bank	Elk River mile 2R

Parcel 12 − (38.7 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel consists of a contiguous tract of land lying along the right descending bank of Elk River mile 2. The entire tract is currently covered with loblolly pine. The plantation was established in the late 1930s and is approaching large saw timber size. Access to the tract is available across private land. The town of Rogersville has developed an industrial park on private land between the town and the river. The town of Rogersville has historically requested that this parcel be allotted to preserve water access for industrial development and attract economic prospects to this region.

Until this tract is selected for development, TVA will continue management of upland wildlife game species. The shoreline and small cove near Barnett Road provide aquatic bed wetland habitat for a wood duck production, roosting, and staging area. The riparian zone also provides habitat for mammals that use aquatic habitats. There is a high probability for the presence of cultural resources, and potential projects would need a survey for historic properties.

Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4−12. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	53–SE
TVA D−Stage Map Numbers	164
Stream Mile and Bank	Elk River mile 2R
Land Use/Land Cover	Deciduous forest and wetlands
Current Agreements/Commitments	None identified

Parcel 13 − (11.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts located along the right descending bank of Elk River. The tract extends among TVA markers 164-193AA to 164-192A and 164-191B to

169-191. This parcel lies entirely below the 560-foot msl, and the current land use is deciduous forest and maintained lawns. The northwest portion of the tract has a high probability for the presence of cultural resources. Elk River View and Pinedale Homesites subdivisions are located on the back-lying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4−13. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	53−SE
TVA D−Stage Map Numbers	164 and 169
Stream Mile and Bank	Elk River mile 2.8R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XWR−441 and XWR−442
Structure Profile	560-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 14 − (5.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of the Elk River at approximately mile 2.3. Locally known as Barnett's Landing, the parcel is encumbered by a revocable license to ADCNR for public recreation. Amenities include a boat ramp and parking area. This parcel has a high probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−14. Parcel Information

Location Component	Parcel Specific Information
County, State	Lauderdale, Alabama
TVA D−Stage Map Numbers	164
Stream Mile and Bank	Elk River mile 2.3R

Parcel 15 − (10.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Elk River. The tract extends among TVA markers 169-201 to corner marker on 560-foot contour lying east of TVA property corner 170. This parcel lies entirely below the 560-foot msl, and the current land use is deciduous forest and maintained lawns. There is a moderate probability for the presence of cultural resources on undisturbed areas. Elk River Park Subdivision is located on the back-lying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4−15. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	168 and 169
Stream Mile and Bank	Elk River mile 4.5R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XWR−441 and XWR−442
Structure Profile	560-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 16 − (20.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located on the northwest shore of Anderson Creek and its confluence with Elk River and along the southern shore of Elk River near Elk River Park subdivision. This parcel follows the 560-foot msl contour and adjoins former TVA property (Tract No. XTWR-3) transferred to the State of Alabama and (Tract No. XWR-535) sold to the Girls Scouts of America for Camp Anderel.

The portion of the parcel that fronts Tract No. XTWR-3 can be accessed by U.S. Highway 72, and amenities include a boat ramp and parking area. The boat ramp receives heavy use by the public. The portion of the parcel that fronts Tract No. XWR-535 can be accessed by Lauderdale

CR 635. The back-lying property (Tract No. XWR-535) was operated as Camp Anderel until August 2012, and development of this property would be subject to deed restrictions for private recreation.

The parcel has a moderate probability for the presence of cultural resources, but it has not been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−16. Parcel Information

Location Component	Parcel Specific Information
County, State	Lauderdale, Alabama
TVA D−Stage Map Numbers	168 and 169
Stream Mile and Bank	Elk River mile 5.5R

Parcel 17 − (1.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located in the Elk River embayment, a tributary to Tennessee River mile 284.3R, and is encumbered by a ROW for U.S. Highway 72. Requests for private water use facilities would not be considered.

Table 4−17. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale and Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	169
Stream Mile and Bank	Elk River mile 4.9B
Land Use/Land Cover	Grassland and road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easement to Lauderdale County, Alabama for a road right–of–way • Permanent easement to the State of Alabama for a park
Potential Projects	None identified
Potential Partners	• Lauderdale County, Alabama • State of Alabama

---

Parcel 18 − (0.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

These two small island tracts are located on within Anderson Creek. The parcel is a hardwood and shrub mixture and provides wetland habitat for both waterfowl and mammals that use aquatic habitats. This tract is used largely for small game hunting. The island is subjected to wave action and rapid erosion forces. Vegetation is regularly inundated during flood events, and the low profile of the island places it within the 100-year flood elevation. The previous RLMP stated this parcel's soil is 100 percent prime farmland. No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−18. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	168
Stream Mile and Bank	Elk River mile 5.6R
Land Use/Land Cover	Hardwood−shrub mixture and vegetation is regularly inundated during flood events
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 19 − (1.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the right descending bank of Anderson Creek. The tract extends between TVA markers 168-205A to 168-215A. This parcel lies entirely below the 560-foot msl, and the current land use is deciduous forest and maintained lawns. There is a moderate probability for the presence of cultural resources in undisturbed areas. Anderson Creek Estates Subdivision is located on the back-lying private property. Water use facilities have been

constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4−19. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	168
Stream Mile and Bank	Anderson Creek Mile 1.7R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XWR−447
Structure Profile	560-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 20 − (23.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the right descending bank of Anderson Creek. Lauderdale County Road (CR) 70 divides the tract east to west and provides access to the property. The tract is covered by timber, including hardwoods and loblolly pine. The state-listed Muhly grass has been found on this parcel. Soils in this area are classified as moderately productive for forestry applications but are also highly erodible. Land uses adjacent to the tract include agriculture, woodland, and residential. This wooded tract provides a visual buffer, screening the county road and shoreline from residential development on either side. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−20. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	168
Stream Mile and Bank	Anderson Creek Mile 1.5R
Land Use/Land Cover	Hardwood forest, loblolly pine, and rock bluff

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Bank fishing and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 21 − (1.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located in the Anderson Creek embayment, a tributary to Elk River mile 5.5R, and is encumbered by a ROW for Lauderdale CR 70. Requests for private water use facilities would not be considered.

Table 4−21. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	168
Stream Mile and Bank	Anderson Creek Mile 2.1B
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Permanent easement to the State of Alabama for a road ROW
Potential Projects	None identified
Potential Partners	• Lauderdale County, Alabama • State of Alabama

Parcel 22 − (3.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Anderson Creek and follows the 560 foot msl contour. This parcel and is encumbered by a permanent easement and adjoins former TVA property (Tract No. XTWR-5) transferred to the State of Alabama for public recreation purposes. The parcel is accessed is by Lauderdale CR 70. Amenities include a boat ramp, access road, and parking lot. Undeveloped portions of this parcel have a high probability for the presence of cultural resources and have not been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−22. Parcel Information

Location Component	Parcel Specific Information
County, State	Lauderdale, Alabama
TVA D−Stage Map Numbers	168
Stream Mile and Bank	Elk River mile 5.7L

Parcel 23 − (29.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts that are located along the left descending bank of Anderson Creek. The tract extends among TVA markers 168-210A to168-211 and 150-175 to 150-176A. This parcel lies entirely below the 560-foot msl, and the current land use is deciduous forest and maintained lawns. There is a high probability for the presence of cultural resources in undisturbed areas. Oakfair Riverview Estates, Anderson Creek, Elk Shores, and Holland Lake View Shores subdivisions are located on the back-lying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4−23. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	168
Stream Mile and Bank	Anderson Creek Mile 1.5L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XWR−202, XWR−448, XWR−449, and XWR−450
Structure Profile	560-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 24 − (30.5 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This tract narrow 1.5-mile strip of bluff and four adjacent islands is known as the Narrow Bluff TVA habitat protection area (HPA). The parcel is primarily bluff with steep hollows. Hardwood timber exists where the terrain will allow, and the potential for soil erosion is high across the entire tract. The state-listed Alabama snow-wreath (*Neviusia alabamensis*) has been known to occur on the parcel. In addition, the state-listed paddlefish (*Polyodon spatula*) and silver redhorse (*Moxostoma anisurum*) have been found in the adjacent reservoir.

Land uses on adjacent parcels include industry, agriculture, and residential. This strip is quite scenic because of the high bluffs that rise immediately from Elk River. The navigation channel is immediately adjacent to the shoreline along this section of the river, and navigation restrictions are in effect on the parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−24. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale and Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	150
Stream Mile and Bank	Elk River mile 7.0R

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Rock bluff and shrub forest with invasion of Japanese honeysuckle and tree-of-heaven
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Protect populations of Alabama snow-wreath • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 25 − (3.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Maple Swamp Branch and Dry Branch, tributaries to Elk River mile 8.7R, and is encumbered by a ROW for Lentzville Road. Requests for private water use facilities would not be considered.

Table 4−25. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	150
Stream Mile and Bank	Elk River mile 8.7R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Permanent easement to Limestone County, Alabama for a road right–of–way
Potential Projects	None identified
Potential Partners	Limestone County, Alabama

Parcel 26 − (8.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This tract is a long, narrow strip centered among Maple Swamp, Dry Branch embayment and Lentzville Road. The land cover consists of a mixed forest dominated with loblolly pine. Small section with rock bluff outcrops and scrub-shrub wetlands along the shoreline are present. The state-listed silver redhorse (*Moxostoma anisurum*) has been found in the adjacent reservoir. However, no federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−26. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	150
Stream Mile and Bank	Elk River mile 8.8R
Land Use/Land Cover	Mixed forest dominated with loblolly pine, rock bluff outcrops, and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 27 − (11.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Big Creek and Elk River. This parcel is encumbered by a ROW for Elk River Mills Road, and there is a moderate probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4−27. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW and 60−SE
TVA D−Stage Map Numbers	151
Stream Mile and Bank	Elk River mile 14–14.6B
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	bank fishing
Current Agreements/Commitments	• Permanent easement to Limestone County, Alabama for a road right–of–way • Permanent easement to Limestone County, Alabama Board of Revenue for a road right–of–way
Potential Projects	Survey for historic properties
Potential Partners	• Limestone County, Alabama • State of Alabama

---

Parcel 28 − (10.0 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This tract is a narrow parcel on the right bank of Elk River directly downstream of Elk River Mills Bridge. The land cover is mixed hardwood and pine forest with scrub-shrub wetlands located along the shoreline. Informal recreation also occurs on this parcel. The area is subject to flooding, and the soils are classed as highly erodible. Extensive mudflats are present along the shoreline during the winter months. The state-listed warty rocksnail (*Lithasia lima*) has historically been found in the adjacent reservoir. However, no federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−28. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SE
TVA D−Stage Map Numbers	151

Location Component and Public Involvement Opportunities	Parcel Specific Information
Stream Mile and Bank	Elk River mile 14.5R
Land Use/Land Cover	Mixed hardwood and pine forest with scrub-shrub wetlands along the shoreline
Known Dispersed Recreation Opportunities	Bank fishing, primitive camping, and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Systematic survey for historic properties • Deep testing survey for historic properties
Potential Partners	None identified

Parcel 29 − (26.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of the Elk River lying between Elk River Mills Road and Sugar Creek Estates subdivision. The property follows the 560-foot msl contour. This parcel and is encumbered by a permanent easement and adjoins former TVA property (Tract No. XTWR-80) transferred to the State of Alabama for public recreation purposes. The parcel is accessed is by Elk River Mills Road. Although no improvements are present, the parcel is used for dispersed recreation activities including bank fishing and primitive camping.

Parcel size, access, topography and location make it ideal for the development of future public recreation amenities. This parcel has a high probability for the presence of cultural resources; however, only a small portion of this parcel has been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−29. Parcel Information

Location Component	Parcel Specific Information
County, State	Limestone, Alabama
TVA D−Stage Map Numbers	151
Stream Mile and Bank	Elk River mile 15R

Parcel 30 − (15.1 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This tract is comprised of a series of small and moderate-sized islands located between Elk River miles 15 and 17.3. Forests and shrubs dominate islands; however, flooding continuously changes the size, shape, and vegetative cover of the islands. Extensive shallow water, emergent wetlands are present around islands. These islands provide excellent cover and habitat for waterfowl and wetland species. The state-listed pocketbook (*Lampsilis ovata*) and silver redhorse (*Moxostoma anisurum*) have been found in the adjacent reservoir. However, no federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−30. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SE
TVA D−Stage Map Numbers	153
Stream Mile and Bank	Elk River miles 15−17.3B
Land Use/Land Cover	Forest, shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Survey for historic properties
Potential Partners	None identified

Parcel 31 − (16.4 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This tract is comprised of a series of small islands located in the Sugar Creek embayment of Elk River. Forests and shrubs dominate islands; however, flooding continuously changes the size, shape, and vegetative cover of the islands. Extensive shallow water, emergent wetlands are present around islands. These islands provide excellent cover and habitat for waterfowl and

wetland species. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−31. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SE
TVA D−Stage Map Numbers	153
Stream Mile and Bank	Sugar Creek Miles 0.2−2.2B
Land Use/Land Cover	Forest, shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Survey for historic properties
Potential Partners	None identified

Parcel 32 − (42.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This bottom land tract consists of high quality forested wetlands. The parcel provides excellent cover and habitat for waterfowl and wetland species. Seven state-listed aquatic species have been recorded within this parcel, the redline darter (*Etheostoma rufilineatum*), Silver shiner (*Notropis photogenis),* Stargazing minnow *(Phenacobius uranops),* silver redhorse *(Moxostoma anisurum),* bigeye chub (*Hybopsis amblops),* rosyface shiner *(Notropis micropteryx),* and fantail darter *(Etheostoma flabellare).* The state-listed silver redhorse (*Moxostoma anisurum*) has been found in the adjacent reservoir. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−32. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−NW
TVA D−Stage Map Numbers	153

Location Component and Public Involvement Opportunities	Parcel Specific Information
Stream Mile and Bank	Sugar Creek Mile 2.5R
Land Use/Land Cover	Forested wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 33 − (7.6 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel consists of two small tracts of land located at the uppermost portion of the Sugar Creek embayment. These parcels lie on either bank of Sugar Creek and west of Cotton Belt Road, which provides public access. The previous RLMP classified this low and flat parcel as 100 percent prime farmland. All of the tract is located within the floodplain and is inundated during major flood events. The land cover consists of riparian zone forest with some wetland characteristics. Primarily shrub vegetation is located adjacent to the neighboring private property.

The state-listed redline darter (Etheostoma rufilineatum), Silver shiner (Notropis photogenis), Stargazing minnow (Phenacobius uranops), silver redhorse (Moxostoma anisurum), bigeye chub (Hybopsis amblops), rosyface shiner (Notropis micropteryx) and fantail darter (Etheostoma flabellare) occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water-use facilities would not be considered.

Table 4−33. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−NW
TVA D−Stage Map Numbers	155
Stream Mile and Bank	Sugar Creek Mile 3B

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Grassland, riparian zone forest with wetland characteristics, and shrubs
Known Dispersed Recreation Opportunities	Bank fishing and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	Survey for historic properties
Potential Partners	None identified

Parcel 34 − (114.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This fairly large tract is located at the upper end of Sugar Creek embayment. The entire tract lies within the 100 year flood elevation; however, for the most part, the soils are not particularly erodible. The parcel is dominated by extensive forested wetlands. Shallow water emergent and scrub-shrub wetlands are located near the southern portion of the parcel. The parcel provides beneficial habitat for upland game and wetland species, and a high amount of big and small game hunting occurs here. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−34. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SE
TVA D−Stage Map Numbers	153
Stream Mile and Bank	Sugar Creek Mile 2.5L
Land Use/Land Cover	Forested wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 35 − (195.4 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel includes three noncontiguous tracts of land and two islands. Most of this parcel is being managed for perennial hay production and wildlife management while preserving its cultural resources. Forested riparian buffers have also been created. There is also an abundance of emergent and scrub-shrub wetlands. The state-listed silver redhorse (*Moxostoma anisurum*) has been found in the adjacent reservoir. However, no federally or state-listed species or species of special status are known to occur on this parcel, yet. Artificial roosting structures were installed on this parcel in 2016 in the hopes of providing permanent summer roosting habitat for Indiana bat. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−35. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−NE
TVA D−Stage Map Numbers	155
Stream Mile and Bank	Elk River mile 19.1R
Land Use/Land Cover	Agricultural with wildlife strips; forested riparian buffers; and emergent and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	Term agricultural license to a private individual for perennial hay production and maintenance of wildlife habitat areas
Potential Projects	Survey for historic properties
Potential Partners	Licensee

Parcel 36 − (2.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Elk River mile 19R, and is encumbered by a ROW for Alabama SR 90. Requests for private water use facilities would not be considered.

Table 4−36. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60–NE
TVA D−Stage Map Numbers	154 and 155
Stream Mile and Bank	Elk River mile 19R
Land Use/Land Cover	Road ROW
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Permanent easement to Limestone County, Alabama for a road ROW
Potential Projects	None identified
Potential Partners	Limestone County, Alabama

Parcel 37 − (30.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located on the north side of Alabama SR 99 (Buck Island Road) and west of Elk River Bridge. The parcel is being managed for perennial hay production. Bottomland hardwood forest, wetlands, and early successional hardwood shrubs are also present. No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−37. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60–NE
TVA D−Stage Map Numbers	155
Stream Mile and Bank	Elk River mile 19.1R
Land Use/Land Cover	Agricultural, bottomland hardwood forest, and early succession hardwood scrubs
Known Dispersed Recreation Opportunities	Hunting and primitive camping
Current Agreements/Commitments	Term agricultural license to a private individual for perennial hay production

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	Licensee

Parcel 38 − (4.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small tract is located on the right bank of the Elk River downstream and adjacent to the Alabama SR 99 Bridge. Land cover consists of mixed hardwoods, scrub shrub, and wetlands. Soils here are classed as potentially, highly erodible. The vegetative understory is continuously altered by flood events. The tract is being used periodically for informal recreational activities, such as bank fishing. No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−38. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60–NE
TVA D−Stage Map Numbers	154
Stream Mile and Bank	Elk River mile 20.3R
Land Use/Land Cover	Hardwood forest
Known Dispersed Recreation Opportunities	Fishing and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 39 − (4.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Elk River mile 20.5R, and is encumbered by a ROW for Alabama SR 90. Requests for private water use facilities would not be considered.

Table 4−39. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60–NE
TVA D−Stage Map Numbers	154
Stream Mile and Bank	Elk River mile 20.5R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Permanent easements to Limestone County, Alabama for a road right–of–way
Potential Projects	None identified
Potential Partners	Limestone County, Alabama

Parcel 40 − (6.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Elk River spanning from the Alabama SR 90 Bridge (Buck Island Bridge) at river mile 20.5 to river mile 21. The parcel adjoins two pieces of former TVA property, Tract Nos. XWR-257 and XTWR-9. Tract No. XWR-257 was sold at public auction, and the rights to construct private water use facilities were not conveyed on the portion of Tract No. XWR-257 adjoining this parcel. Tract No. XTWR-9 was transferred to the State of Alabama to provide for public boat access. Amenities on the parcel include a boat ramp, courtesy pier, and parking lot. Undisturbed portions of this parcel have a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−40. Parcel Information

Location Component	Parcel Specific Information
County, State	Limestone, Alabama
TVA D−Stage Map Numbers	154
Stream Mile and Bank	Elk River mile 20.5−21R

Parcel 41 − (7.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is made up of three small islands located near Elk River mile 21. The land cover consists of hardwood forest and scrub-shrub wetlands. The vegetative understory is continuously altered by flood events. No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−41. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60–NE
TVA D−Stage Map Numbers	154
Stream Mile and Bank	Elk River mile 21B
Land Use/Land Cover	Hardwood forest and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Bank fishing and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 42 − (84.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the right descending bank of Elk River mile 21. The land cover is being managed for perennial hay production with forested wetland riparian buffers. There are some emergent wetlands present within the agricultural field. The activities associated with hay

production are used in such a way to maintain the wetland vegetation stage as emergent. No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−42. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60–NE
TVA D−Stage Map Numbers	154
Stream Mile and Bank	Elk River mile 23R
Land Use/Land Cover	Agriculture with forested wetland riparian wetland buffers
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	Term agricultural license to a private individual for perennial hay production
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	Licensee

Parcel 43 − (206.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This is the location of the old Elk River Fish Hatchery. The parcel is located on the right descending bank of the Elk River, between river miles 22 and 24.5. The parcel is accessible by water and a secondary road from Buck Island Road (Alabama SR 99) some 1.5 miles to the west. The municipal water intake for the city of Athens is located on the left descending bank of the Elk River directly across from this tract. The land cover consists of bottomland hardwood forest, early successional scrub forest, and forested and scrub-shrub wetlands. Signs of frequent flooding are evident.

When Wheeler Dam was nearing completion, there was some concern among fisheries biologists that large reservoirs in the South would, in a period of a few years, become "biological deserts" requiring constant restocking of several fish species to maintain biological diversity and

provide a sport fishery. With the cooperation of the United States Bureau of Fisheries, TVA developed the Elk River hatchery to meet this anticipated need. On approximately 150 acres within a wide bend of the river, earthen dikes were constructed dividing the flat lowland into a grid of 77 rectangular containment basins, each with its own water control valve. A central mechanism regulated the inflow of water from the Elk River. Within a year of completion of the project, however, it was closed. The underlying strata and soil type of the location made the enclosures leaky and hard to maintain, and the river overflowed regularly, inundating the rearing ponds. It soon became apparent, moreover, that aquatic life in the reservoir, including fish species, could maintain itself very well without constant stocking, and the project was abandoned.

The tract is subject to grazing by cattle entering from surrounding farmlands. Attempts by adjacent landowners to fence the property lines have been frustrated by periodic flooding, a problem which also limits several other uses for the land. No federally or state-listed species or species of special status are known to occur on this parcel. There is a low probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−43. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60–NE
TVA D−Stage Map Numbers	156
Stream Mile and Bank	Elk River mile 23.5R
Land Use/Land Cover	Bottomland hardwood forest, early successional scrub forest, and forested and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Evaluate the historic significance of the Elk River fish hatchery
Potential Partners	None identified

Parcel 44 − (70.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located on the left bank of the Elk River at river mile 24 and directly across from the Elk River fish hatchery. The property is being managed for row crop production. There is also bottomland forest, riparian forest along Sulphur Creek, and forested wetlands. Approximately 90 percent of the acreage is classed as prime farmland; approximately 10 percent has high soil erosion potential. The state-listed redline darter (*Etheostoma rufilineatum*), stonecat (*Noturus flavus*), and bigeye chub (*Hybopsis amblops*) occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−44. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60–NE
TVA D−Stage Map Numbers	156
Stream Mile and Bank	Elk River mile 23.9L
Land Use/Land Cover	Agriculture, bottomland hardwood forest, riparian forest, and forested wetlands
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	Term agricultural license to a private individual for row crop (corn, soybean, and wheat) production
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	Licensee

Parcel 45 − (52.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of two noncontiguous tracts of land and one island. The land cover consists of bottomland hardwood forest, early successional scrub vegetation, and forested and scrub-shrub wetlands. The state-listed silver redhorse (*Moxostoma anisurum*) has been found in the

adjacent reservoir. However, no federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−45. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60–NE
TVA D−Stage Map Numbers	154
Stream Mile and Bank	Elk River mile 22L
Land Use/Land Cover	Bottomland hardwood forest, early successional scrub forest, and forested and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 46 − (117.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of Elk River and adjacent to Alabama SR 99 bridge. This parcel has historically been encumbered by a license agreement with the State of Alabama for a wildlife management area. When the license term concluded, hardwood saplings were planted throughout the parcel. The land cover consists of the planted hardwoods with hardwood forested riparian buffers. Scrub-shrub and emergent wetlands are also present. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−46. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60–NE
TVA D−Stage Map Numbers	154
Stream Mile and Bank	Elk River mile 20.5L
Land Use/Land Cover	Early succession scrub (planted hardwoods) with hardwood forested riparian buffers; and scrub-shrub and emergent wetlands
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 47 − (317.2 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This large parcel is situated on the left descending bank of the Elk River and approximately one mile downstream of Alabama S. R. 99 (Buck Island) bridge. This parcel was encumbered by a license agreement for agricultural purposes until 1990. Since that time, it has been managed for wildlife habitat. The land cover includes planted hardwoods with hardwood forested riparian buffers. Scrub-shrub wetlands are also present. The state-listed silver redhorse (*Moxostoma anisurum*) has been found in the adjacent reservoir. However, no federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−47. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60–NE
TVA D−Stage Map Numbers	153 and 155
Stream Mile and Bank	Elk River mile 18.5L
Land Use/Land Cover	Bottomland hardwood forest, early successional scrub forest, and forested and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for archaeological sites and historic structures
Potential Partners	None identified

Parcel 48 − (5.3 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of the Elk River at mile 17.1 and situated at the end of Grigsby Ferry Road. The property provides the public access to the reservoir during periods of full pool. Amenities include a parking lot and unimproved boat ramp. There is a moderate probability for the presence of cultural resources; however, this parcel has not been surveyed for historic properties.

The parcel is not encumbered with a contractual agreement. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−48. Parcel Information

Location Component	Parcel Specific Information
County, State	Limestone, Alabama
TVA D−Stage Map Numbers	154
Stream Mile and Bank	Elk River mile 17.1L

Parcel 49 − (3.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This narrow parcel is located along the left descending bank of the Elk River at mile 14.7. Elk River Mills Road bisects the property. Upstream of Elk River Mills Road, the property follows the 560-foot msl contour, and the downstream portion follows Elk River Mills Road. Most of the parcel is located within the Limestone County's road ROW and adjoins former TVA property (Tract No. XWR-542). Amenities include a boat ramp, courtesy piers, and a parking lot.

There is a moderate probability for the presence of cultural resources in the undeveloped portions of this parcel; however, this parcel has not been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−49. Parcel Information

Location Component	Parcel Specific Information
County, State	Limestone, Alabama
TVA D−Stage Map Numbers	151
Stream Mile and Bank	Elk River mile 14.7L

Parcel 50 − (137.6 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel surrounds a large portion of the Big Creek embayment. The land cover includes both upland and bottomland hardwood forests. Scrub-shrub wetlands are also located in the upper reaches of the Big Creek embayment. The topography is also quite diverse, ranging from steep, hilly terrain to low wetlands. Soils over most of the area are classified as highly erodible. Some informal recreation is also occurring. The state-listed stargazing minnow (*Phenacobius uranops*), bigeye chub (*Hybopsis amblops*) and redline darter (*Etheostoma rufilineatum*) have been found in Big Creek adjacent to parcel. In addition, the state-listed warty rocksnail (*Lithasia lima*) historically recorded in Elk River adjacent to parcel. However, no federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−50. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SE
TVA D−Stage Map Numbers	151
Stream Mile and Bank	Elk River mile 14.5L
Land Use/Land Cover	Scrub-shrub wetlands and upland and bottomland hardwood forest
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 51 − (13.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel consists of two noncontiguous tracts of land located along the left descending bank of the Elk River. The tract extends among TVA markers 150-170 to 150-186 and TVA markers 150-185 to 152-146. This parcel lies entirely below the 560-foot msl, and the current land use is deciduous forest and maintained lawns. There is a moderate probability for the presence of cultural resources. Stewarts Ferry Subdivision and Blue Springs Park Subdivision are located on the back-lying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4−51. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	150
Stream Mile and Bank	Elk River mile 9.8L
Land Use/Land Cover	Deciduous forest and maintained lawns

Location Component and Public Involvement Opportunities	Parcel Specific Information
Fronts Former TVA Tract (s)	XWR−224, XWR−225, XWR−456, XWR−457, and XWR−458
Structure Profile	560-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 52 − (5.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small and rectangular tract is **located** along the left descending bank of the Elk River near river mile 9 and lies between Elk River View and Stewart Ferry subdivisions. The parcel is oriented northeast/southwest at a right angle to the shoreline and encompasses most of a deep hollow filled with large hardwoods. A gravel road running north from U.S. Route 72 provides public access and was used in the past to launch small boats at the mouth of the hollow. Floods have deposited logs and other debris on the old launch site, and access is now difficult. No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−52. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	169
Stream Mile and Bank	Elk River mile 5.3L
Land Use/Land Cover	Limestone bluff with hardwood forests
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 53 − (7.5 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is land located along the left descending bank of Elk River. The tract extends between TVA markers 150-183 to 169-182. This parcel is approximately 600 feet long and the depth varies from 50 feet to 150 feet of TVA property at the northern end. The current land use is deciduous forest and maintained lawns. Hampton Campsites North and South Subdivision are located on the back-lying private property. There is a moderate probability for the presence of cultural resources, and this parcel has not been previously surveyed for cultural resources. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4−53. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	168
Stream Mile and Bank	Elk River mile 5.8L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XWR−206
Structure Profile	Varies
Current Agreements/Commitments	Approved water use facilities

Parcel 54 − (0.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small tract is located along the left descending bank of the Elk River. The terrain consists of a limestone bluff. There is a hardwood forest located on the upper platform located on the limestone bluff. Scrub hardwoods are found along the bluff. No federally or state-listed species or species of special status are known to occur on this parcel. There is a low probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−54. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60–SW
TVA D−Stage Map Numbers	169
Stream Mile and Bank	Elk River mile 5.3L
Land Use/Land Cover	Limestone bluff with hardwood forests
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 55 − (5.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of the Elk River stretching between miles 4.9 and 5.3. The property follows the 560-foot msl contour and adjoins former TVA property (Tract No. XWR-451) sold to the state of Alabama for recreation purposes. The Elk River Lodge is located on the back-lying property and is operated in conjunction with Joe Wheeler State Park. Amenities include a boat ramp, parking lot, access road, lodge, and restaurant. Additional information pertaining to the Elk River Lodge can be found on the state of Alabama's Web site, http://www.alapark.com/joe-wheeler-state-park. There is a low probability for the presence of cultural resources, and most of the parcel has been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−55. Parcel Information

Location Component	Parcel Specific Information
County, State	Limestone, Alabama
TVA D−Stage Map Numbers	169
Stream Mile and Bank	Elk River mile 4.9−5.3L

Parcel 56 − (44.6 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel consists of a contiguous tract of land lying along the left descending bank of Elk River miles 4.2 to 4.8. The entire tract is currently covered with deciduous forest. Access to the tract is available across U.S. Highway 72 or private land. Until this tract is selected for development, TVA will continue management of upland wildlife game species. There is a moderate probability for the presence of cultural resources. A survey for historic properties is a possible future project. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4−56. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60–SW
TVA D−Stage Map Numbers	169
Stream Mile and Bank	Elk River miles 4.2 – 4.8L
Land Use/Land Cover	Deciduous forest
Current Agreements/Commitments	None identified

Parcel 57 − (136.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This linear parcel has more than 1 mile of shoreline along the left descending bank of the Elk River. It features deep coves, scrub-shrub wetlands, rolling topography, hardwood forest uplands, and scattered limestone bluffs. Wetlands have formed by historic deposition of driftwood during flood events. White-tailed deer is the featured upland species of game on the parcel. The pine forest cover also provides diversity from adjacent private lands behind TVA which are currently in pasture and row crops. Multiple coves along the shoreline provide suitable habitat for mammals that use aquatic habitats and wood duck staffing, roosting, and production areas. These same coves provide excellent sport fishery for largemouth bass.

No federally or state-listed species or species of special status are known to occur on this parcel. There are known cultural resources within this parcel. Requests for private water use facilities would not be considered.

Table 4−57. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	169
Stream Mile and Bank	Elk River mile 4.0L
Land Use/Land Cover	Hardwood forests, limestone bluffs, and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 58 − (100.7 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Long Oak Forest TVA small wild area (SWA). It represents approximately 1 mile of shoreline along the left descending bank of the Elk River. Much of the tract is bordered to the east by intensively managed agricultural land, predominantly row crops. The tract contains upland hardwoods exceeding 105 years old. The northern border of the tract joins a 20-acre loblolly pine plantation established in the late 1930s by Civilian Conservation Corps. Chestnut oak and shagbark hickory are found on the bluffs, with an understory of mountain laurel, buckeye, and dogwood. The bluffs and coves offer habitat for a wide variety of wildflowers. The coves are composed of white oak, yellow-poplars, and beeches. A state-listed species of special concern, red baneberry *(Actea pachypoda)* is found on parcel; approximately 15 populations are known to exist in northern Alabama.

This area is ideal for native plant group field trips, birding, and passive recreation, such as hiking. It provides beautiful views of the river from the top of the bluffs. No federally listed species are known to occur on this parcel. There are known cultural resources on this parcel. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4−58. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	53–SE
TVA D−Stage Map Numbers	164 and 169
Stream Mile and Bank	Elk River mile 2.5L
Land Use/Land Cover	Early successional hardwoods and planted pines in reforested agricultural fields; hardwood forests; limestone bluffs; and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 59 − (18.4 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is land located along the left descending bank of Elk River. The tract extends between TVA markers 164-196 to 170-137. This parcel lies entirely below the 560-foot msl, and the current land use is deciduous forest and grasslands. Given the level of residential development, there is a low probability for the presence of undisturbed cultural resources. The Pointe Subdivision is located on the back-lying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered. Water use facilities must be less than 1,000 square feet, and maintained lawns are not permitted on TVA property.

Table 4−59. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	53−SE
TVA D−Stage Map Numbers	168
Stream Mile and Bank	Elk River mile 1.4L
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XWR−459
Structure Profile	560-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 60 − (100.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large tract is located along the left descending bank of the Elk River at the confluence of the Tennessee River. Hardwood forests dominate the tract. A large portion of the hardwood is bottomland species averaging 70 years old. The natural beauty of small rock bluff formations and the forest background provide added scenic value to the large open body of water made by the joining of the two rivers. Scrub-shrub wetlands are located along the shoreline at the northern portion of the parcel. Along the southern portion of the parcel, abandoned agricultural fields are reverting through natural succession to mature forest.

The main access to the tract is from Limestone CR 38 (Snake Road). Evidence of hunting, bank fishing, and primitive camping can be seen throughout any given season. Upland small game is prevalent, with white-tailed deer the featured large game species on the tract. Numerous federally and state-listed mussel species were present at the mouth of the Elk River prior to impoundment, but no existing populations are currently known. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−60. Parcel Information

\	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	53−SE
TVA D−Stage Map Numbers	164 and 170
Stream Mile and Bank	Tennessee River mile 284.3R
Land Use/Land Cover	Scrub-shrub wetlands and upland mixed and early successional pine and hardwood forests
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 61 − (4.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is land located along the right descending bank of the Tennessee River. The tract extends between TVA markers 170-118A to 170-109. This parcel lies entirely below the 560-foot msl contour, and the current land use is deciduous forest and maintained lawns. There is a moderate probability for the presence of cultural resources. Burgreen Subdivision is located on the back-lying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4−61. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	53−SE and 60−SW
TVA D−Stage Map Numbers	170
Stream Mile and Bank	Tennessee River mile 286.2R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XWR−283, XWR−284, XWR−285, XWR−286, and XWR−287
Structure Profile	560-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 62 − (68.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located north of Snake Road and surrounds the upper end of Lucy's Branch embayment. Part of the tract is a 60-year-old bottomland hardwood, and part (about 12 acres) of the tract supports a loblolly pine plantation dating from the Civilian Conservation Corps period of the late 1930s. Soils here are high to medium productivity for forestland, but roughly 20 percent of the land is subject to flooding. Eighty percent of the soil area is classed as highly erodible or potentially highly erodible. No federally or state-listed species or species of special status are known to occur on this parcel. Lucy Cemetery is present on the parcel, and there is a high probability for the presence of other cultural resources. However, a comprehensive archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−62. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	169
Stream Mile and Bank	Tennessee River mile 287R
Land Use/Land Cover	Upland and bottomland forest with dispersed planted loblolly pines
Known Dispersed Recreation Opportunities	Bank fishing and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 63 − (32.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of the Tennessee at the confluence with Lucy's Branch. Access to the parcel is by Snake Road which borders the parcel on the north, and bank fishing is popular at this area. The property is encumbered by a revocable license agreement to Limestone County, Alabama for public recreation. Amenities on the parcel include a boat ramp, courtesy pier, pavilion, and picnic area. A small campground is under construction.

There is moderate probability for the presence of cultural resources in the undisturbed areas. A systematic survey for historic properties has not occurred throughout the entire parcel. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−63. Parcel Information

Location Component	Parcel Specific Information
County, State	Limestone, Alabama
TVA D−Stage Map Numbers	169 and 170
Stream Mile and Bank	Tennessee River mile 287.2R

Parcel 64 − (2.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small triangular tract is located on the first sizable inlet east of Lucy's Branch along the right descending bank of the Tennessee River. Access is by Snake Road, which defines the northern border of the tract. This wooded area is subject to flooding, and the soil is classed as highly erodible. Forested wetlands are also present along the reservoir.

No federally or state-listed species or species of special status are known to occur on this parcel. There is a low probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−64. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	172
Stream Mile and Bank	Tennessee River mile 288R
Land Use/Land Cover	Forested wetlands and hardwood forest
Known Dispersed Recreation Opportunities	Bank fishing and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 65 − (8.7 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is land located along the right descending bank of the Tennessee River. The tract extends between TVA markers 172-128 to 172-129. This parcel lies entirely below the 560-foot msl, and the current land use is deciduous forest and maintained lawns. There is a moderate probability for the presence of cultural resources. Ozier Subdivision and Dogwood Subdivision are located on the back-lying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4−65. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	172
Stream Mile and Bank	Tennessee River mile 287.6R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XWR−460 and XWR−461
Structure Profile	560-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 66 − (9.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of two narrow tracts of forested limestone bluff along the right descending bank of the Tennessee River. No federally or state-listed species or species of special status are known to occur on this parcel. There is a low probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−66. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	172
Stream Mile and Bank	Tennessee River mile 289R
Land Use/Land Cover	Forested limestone bluff
Known Dispersed Recreation Opportunities	Bank fishing and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for caves and bluff shelters
Potential Partners	None identified

Parcel 67 − (7.6 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This is another narrow shoreline parcel located directly upstream from an adjoining tract with much the same character and description. It is forested limestone bluff, and the soils have high erosion potential. No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. No existing shoreline

improvements are currently present, and requests for private water use facilities would not be considered.

Table 4−67. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	172
Stream Mile and Bank	Tennessee River mile 289R
Land Use/Land Cover	Limestone bluff with upland hardwood forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 68 − (14.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is land located along the right descending bank of the Tennessee River and Coxey Creek. The tract extends between TVA markers 173-140 to 173-141. This parcel lies entirely below the 560-foot msl, and the current land use is deciduous forest and maintained lawns. The portion of the parcel located within Coxey Creek has a moderate probability for the presence of cultural resources; the portion of the parcel fronting the Tennessee River has a low probability for the presence of cultural resources due to the extensive residential development. Coxey Creek, Lazy Livin' Acres, and Beechwood Acres subdivisions are located on the back-lying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4−68. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	172 and 173
Stream Mile and Bank	• Coxey Creek Mile 0.2 to 0.6B • Tennessee River mile 289R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XWR−462, XWR−463, XWR−464, XWR−465, XWR−466, and XWR−467
Structure Profile	560-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 69 − (8.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located on the right descending bank of the Tennessee River in the Egypt Bluff area. The terrain is a forested limestone bluff, and the soils are highly erodible. No federally or state-listed species or species of special status are known to occur on this parcel. There is a low probability for the presence of cultural resources; however, an archaeological survey has not been conducted. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4−69. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	61−NW
TVA D−Stage Map Numbers	173
Stream Mile and Bank	Tennessee River mile 290R
Land Use/Land Cover	Forested limestone bluff
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 70 − (8.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

Similarly to the adjoining property, this parcel is located on the right descending bank of the Tennessee River in the Egypt Bluff area. The terrain is a forested limestone bluff, and the soils are highly erodible. No federally or state-listed species or species of special status are known to occur on this parcel. There is a low probability for the presence of cultural resources; however, an archaeological survey has not been conducted. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4−70. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	61−NW
TVA D−Stage Map Numbers	173
Stream Mile and Bank	Tennessee River mile 290.1R
Land Use/Land Cover	Forested limestone bluff
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 71 − (9.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

Similarly to the adjoining property, this parcel is located on the right descending bank of the Tennessee River in the Egypt Bluff area. The terrain is a forested limestone bluff, and the soils are highly erodible. No federally or state-listed species or species of special status are known to occur on this parcel. There is a low probability for the presence of cultural resources; however, an archaeological survey has not been conducted. No existing shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4−71. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	61−NW
TVA D−Stage Map Numbers	173
Stream Mile and Bank	Tennessee River mile 290.3R
Land Use/Land Cover	Forested limestone bluff
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 72 − (6.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel adjoins former TVA property that was sold to the 560−foot msl without rights for water use facilities. The land cover consists of hardwood forest and forested and scrub−shrub wetlands. No federally or state-listed species or species of special status are known to occur on this parcel. There is a low probability for the presence of cultural resources; however, an

archaeological survey has not been conducted. There are no existing shoreline improvements and requests for private water use facilities would not be considered.

Table 4−72. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	61–NW
TVA D−Stage Map Numbers	176
Stream Mile and Bank	Tennessee River mile 291.5R
Land Use/Land Cover	Forested and scrub-shrub wetlands and hardwood forests
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 73 − (10.3 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is land located along the right descending bank of the Tennessee River and Poplar Creek. The tract extends between TVA markers 176-248 to 176-241. This parcel lies entirely below the 560-foot msl, and the current land use is deciduous forest and maintained lawns. The upper portions of Poplar Creek have a moderate probability for the presence of cultural resources. The lowest portion of the parcel fronting the Tennessee River has a low probability for the presence of cultural resources. Poplar Creek and Poplar Point subdivisions are located on the back-lying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4−73. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	61−NW
TVA D−Stage Map Numbers	176
Stream Mile and Bank	• Poplar Creek 0.4L • Tennessee River mile 291.5R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XWR−469 and XWR−470
Structure Profile	560-foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 74 − (60.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of the Tennessee River at mile 298 and is known as the Round Island Creek Recreation Area. Access is by Cowford Road. A portion of the parcel is encumbered by a revocable license agreement by Limestone County, Alabama for public recreation. Amenities include a campground, picnic area, swimming beach, boat ramp, courtesy pier, bathhouse, and a fishing pier. The undisturbed portions of the parcel have a high probability for the presence of cultural resources; however, a systematic survey for historic properties has not occurred for the entire parcel. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−74. Parcel Information

Location Component	Parcel Specific Information
County, State	Limestone, Alabama
TVA D−Stage Map Numbers	180 and 181
Stream Mile and Bank	Elk River mile 20.5−21R

Parcel 75 − (20.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located at Tennessee River mile 297.7R, and is encumbered by TVA's Browns Ferry–Trinity 500 kilovolt transmission line (kV–TL). There is a moderate probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4−75. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	61–NE
TVA D−Stage Map Numbers	180 and 181
Stream Mile and Bank	Tennessee River mile 297.7R
Land Use/Land Cover	Transmission line right–of–way
Known Dispersed Recreation Opportunities	fishing, picnicking, and primitive camping
Current Agreements/Commitments	Revocable license to Limestone County, Alabama Park and Recreation Department for a campground
Potential Projects	• Campground expansion; • Survey for historic properties
Potential Partners	Limestone County, Alabama

Parcel 76 − (35.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is adjacent to the Round Island Creek campground. The land cover consists of primarily hardwood forest with patches of planted loblolly pine, and wetland conditions dominate most of the parcel. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−76. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	61–NE
TVA D−Stage Map Numbers	180
Stream Mile and Bank	Round Island Creek Mile 0.2L
Land Use/Land Cover	Mixed forest-primary hardwood with patches of planted loblolly pine; and wetlands
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for archaeological sites and historic structures
Potential Partners	None identified

Parcel 77 − (332.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located immediately west of the Swan Creek WMA and surrounds the lower portions of the Round Island Creek embayment in Limestone County, Alabama. This parcel features a mixture of scrub forest; loblolly pine plantation; forested, scrub-shrub, and emergent wetlands; and agricultural lands.

A term revocable agricultural license is used to manage a portion of this tract for small game and non-game wildlife. Agricultural fields are used for small grain production, and native warm-season grass buffers are maintained along the property boundary of the agricultural fields. TVA partners with the licensee to maintain these buffers and other wildlife habitat areas near the agricultural fields. The area receives substantial use for fishing in the flooded embayments.

Public access is available by boat to portions of this parcel; in addition, CRs are located along the eastern edge of the parcel. An informal boat launch area is maintained along the lower left descending bank of Round Island Creek. Dispersed recreation use of this parcel includes hunting, fishing, primitive camping, and wildlife observation.

No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, only a portion of the area has been surveyed for historic properties. Requests for private water use facilities would not be considered.

Table 4−77. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	61–NE
TVA D−Stage Map Numbers	180 and 183
Stream Mile and Bank	TRM 298−299R
Land Use/Land Cover	Agricultural fields; mixed forest-hardwood with large tracts of planted loblolly pine; and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Bank fishing, hunting, primitive camping, and wildlife observation
Current Agreements/Commitments	Term agricultural license to a private individual for row crops (corn and soybean) production with native warm season grass field buffers
Potential Projects	• Evaluate the significance of known cultural resources • Increase and improve vegetation management for wildlife • Systematic survey for historic properties
Potential Partners	Licensee

Parcel 78 − (35.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located at Tennessee River mile 299R, and is encumbered by a TVA 500 kV–transmission line. There is a low probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4−78. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	61–NE
TVA D−Stage Map Numbers	180 and 183

Location Component and Public Involvement Opportunities	Parcel Specific Information
Stream Mile and Bank	Tennessee River mile 299R
Land Use/Land Cover	Transmission line right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	None identified

Parcel 79 − (56.9 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located adjacent to the upper portions of the Round Island Creek embayment in Limestone County, Alabama. Public access is limited on this parcel, with two CRs located through the northern portion and along the eastern edge of the parcel. A portion of Round Island Creek at the northern end of this parcel remains free-flowing and is only affected by Wheeler Reservoir during significant flood events. This parcel features a mixture of bottomland forest and loblolly pine plantation and agricultural lands.

A term revocable agricultural license is used to manage a portion of this tract for small game and non-game wildlife. Agricultural fields are used for small grain production. TVA partners with the licensee to maintain wildlife habitat areas near the agricultural fields. The area is primarily used for hunting with limited primitive camping and wildlife observation.

The federally listed slender campeloma (*Campeloma decampi*) is known to occur in the lower portions of Round Island Creek and has been observed within this parcel. No state-listed species are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, only a portion of the area has been surveyed for historic properties. Requests for private water use facilities would not be considered.

Table 4−79. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	61–NE
TVA D−Stage Map Numbers	183

Location Component and Public Involvement Opportunities	Parcel Specific Information
Stream Mile and Bank	Round Island Creek Mile 2B
Land Use/Land Cover	Bottomland hardwood forest with planted loblolly pine and dense privet understory
Known Dispersed Recreation Opportunities	Bank fishing and hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 80 − (1.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Round Island Creek, a tributary to TRM 298.1R, and is encumbered by a ROW for Nuclear Plant Road. Requests for private water use facilities would not be considered.

Table 4−80. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	61–NE
TVA D−Stage Map Numbers	180 and 183
Stream Mile and Bank	Tennessee River mile 298.1R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Limestone County, Alabama Board of Revenue for a road right–of–way
Potential Projects	None identified
Potential Partners	Limestone County, Alabama

Parcel 81 − (4,145.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located immediately west of U.S. Highway 31 and south of Harris Station Road in Limestone County, Alabama. This parcel features a mixture of bottomland forest; loblolly pine plantation; forested, scrub-shrub, and emergent wetlands; agricultural lands; and open water associated with the Swan Creek WMA. This parcel is encumbered by a term easement with ADCNR for a WMA. A portion of this parcel, known locally as the West Dike Area, is managed by ADCNR by controlling water levels through levees and mechanical pumps. This area is dewatered during summer months to allow farmer access for small grain production, and then is flooded during winter for waterfowl habitat. Public access is available by boat to portions of this parcel; in addition, roads have been established through portions of the parcel to improve accessibility. However, access to the parcel is regulated and managed by ADCNR. Management emphasis is on providing waterfowl hunting opportunities from drawn blinds and designated temporary blind sites. Additionally, other small and big game hunting is allowed. The area also receives substantial use for fishing in the flooded embayments and tributary streams. The area is also used for wildlife viewing opportunities, including one of North Alabama's top shorebird viewing areas, Beulah Bay. Dispersed use of this parcel is regulated and managed by ADCNR; most use is for hunting, fishing and wildlife viewing. No federally listed as endangered, threatened or special status species are known to occur on this parcel. The state-listed prairie vole is known to occur on this parcel. The tuscumbia darter (*Etheostoma* Tuscumbia) and the spring pygmy sunfish (*Elassoma alabamae*) have been found in the adjacent reservoir, and past reintroduction efforts of the spring pygmy sunfish have met with limited success. This species is proposed for federal listing and continued reintroduction efforts are likely. Habitat for this species is present on this parcel, so future occurrence is possible. There is a high probability for the presence of cultural resources, but only a portion of the area has been surveyed. Requests for private water use facilities would not be considered.

Table 4−81. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	61−NE and 68–NW
TVA D−Stage Map Numbers	183, 184, 185, 187, 188, and 189
Stream Mile and Bank	Tennessee River miles 299−304.3R

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Agricultural fields, bottomland forest, pine plantation, and forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	Bank fishing, hiking, hunting, photography, and wildlife observation
Current Agreements/Commitments	Term easement to Alabama Department of Conservation and Natural Resources for a wildlife management area
Potential Projects	• Evaluate the significance of known cultural resources • Reintroduction efforts of the spring pygmy sunfish • Systematic survey for historic properties
Potential Partners	Alabama Department of Conservation and Natural Resources

---

Parcel 82 − (22.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains the levees and pumps associated with the dewatering unit within the Swan Creek WMA. The back-lying land is used to support the dewatering unit, and there is a low probability for the presence of cultural resources on the levees. Requests for private water use facilities would not be considered.

Table 4−82. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	61–NE and 68–NW
TVA D−Stage Map Numbers	185, 188, and 189
Stream Mile and Bank	Tennessee River miles 302 to 304.5L
Land Use/Land Cover	pump and levee
Known Dispersed Recreation Opportunities	Bank fishing, hiking, hunting, photography, and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	None identified
Potential Partners	Alabama Department of Conservation and Natural Resources

---

Parcel 83 − (19.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Spring Creek and Swan Creek, tributaries to TRM 301R, and is encumbered by a ROW for Harris Station Road. This parcel is adjacent to the Swan Creek WMA. Requests for private water use facilities would not be considered.

Table 4−83. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	61−NE and 68−NW
TVA D−Stage Map Numbers	183, 187, and 188
Stream Mile and Bank	Tennessee River mile 301R
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Limestone County, Alabama Board of Revenue for a road right–of–way
Potential Projects	None identified
Potential Partners	• Alabama Department of Natural Resources and Conservation • Limestone County, Alabama

Parcel 84 − (31.7 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel consists of a railroad crossing the reservoir at TRM 304.4. The area is restricted to disturbed ROW represents a low probability for the presence of cultural resources. Areas undisturbed by construction of rail tracks have a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4−84. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	68–NW and 68–SW
TVA D−Stage Map Numbers	189
Stream Mile and Bank	TRM 304.4R
Land Use/Land Cover	Railroad ROW
Current Agreements/Commitments	Term easement to the Alabama Department of Conservation and Natural Resources for wildlife management

---

Parcel 85 − (58.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of the Tennessee River at mile 305 and is encumbered by a revocable license to the City of Decatur, Alabama, for public recreation. Public recreation uses occurring on this parcel include bank fishing, walking for pleasure, bird watching, and nature study. The undeveloped portions of this parcel have a high probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−85. Parcel Information

Location Component	Parcel Specific Information
County, State	Limestone, Alabama
TVA D−Stage Map Numbers	189
Stream Mile and Bank	TRM 305R

Parcel 86 − (69.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located at Tennessee River mile 305B, and is encumbered by ROWs for U.S. Highway 31, U.S. Highway 72, and Alabama SR 20. A large portion of this parcel includes the causeway for the ROWs. There is a moderate probability for the presence of cultural resources

in that portion that is not covered by existing highways. Requests for private water use facilities would not be considered.

Table 4−86. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	68–NW and 68−SW
TVA D−Stage Map Numbers	189 and 196
Stream Mile and Bank	TRM 305B
Land Use/Land Cover	Road ROW
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Permanent easement to the State of Alabama for a road ROW
Potential Projects	None identified
Potential Partners	• City of Decatur, Alabama • State of Alabama

---

Parcel 87 − (81.5 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel contains the levees and pumps associated with the Rockhouse Dewatering Unit within the WNWR. The back-lying land is used to support the dewatering unit, and there is a high probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4−87. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	68–NW and 68–SW
TVA D−Stage Map Numbers	189, 196, 197, and 201
Stream Mile and Bank	TRMs 305 to 310.5RL
Land Use/Land Cover	Pump and levee
Known Dispersed Recreation Opportunities	Bank fishing, hiking, hunting, photography, and wildlife observation
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	Survey to evaluate the significance of historic properties
Potential Partners	USFWS

Parcel 88 − (13,313.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel is allocated for the WNWR and, for the most part, follows the 560-foot msl contour. The WNWR was established in 1938 by Executive Order from President Franklin D. Roosevelt. This action paved the way for the transfer of approximately 34,500 acres of land from TVA to the USFWS. This former TVA property adjoins this parcel, and the entire parcel is encumbered by a permanent easement between the USFWS and TVA to manage the refuge.

The WNWR was established as a refuge and wildlife management area for migratory birds and other wildlife. The WNWR encompasses lands on both the north and south shores of the Tennessee River, as well as lands along several primary tributaries (Piney, Beaverdam, Limestone, Cotaco, and Flint creeks). WNWR contains several habitats including open reservoir waters, bottomland hardwoods, upland oak/hickory and pine forests, freshwater marsh and, open grasslands. The diversity of habitats found on the WNWR provides habitat for hundreds of species of birds, fish, reptiles, and plants. WNWR provides ample opportunities for several dispersed recreation opportunities including; fishing, hunting, hiking, wildlife observation, photography, and camping. For more information, including a comprehensive list of species found there, please visit the WNWR's Web site at http://www.fws.gov/wheeler.

Several federally and state-listed species and 5 caves are known to occur on this tract or in the adjacent reservoir. Federally listed species include sheepsnose (*Plethabasus cyphus*), spactaclecase (*Cumberlandia monodonta*), pink mucket (*Lampsilis abrupta*), rough pigtoe (*Pleurobema plenum*), armored marstonia (*Marstonia pachyta*), Anthony's river snail (*Athearnia anthonyi*), slender campeloma (*Campeloma decampi*), and gray bat (*Myotis grisescens*). State-listed species include two ground beetles (*Rhadine caudata* and *Batriasymmodes spelaeus*), cave spring cave spider (*Nesticus jonesi*), Ohio pigtoe (*Pleurobema cordatum*), butterfly (*Ellipsaria lineolata*), mucket (*Actinonaias ligamentina*), pocketbook (*Lampsilis ovata*), pink papershell (*Potamilus ohiensis*), skirted hornsnail (*Pleurocera pyrenella*), two troglobitic crayfish

(*Cambarus jonesi* and *Procambarus pecki*), tuscumbia darter (*Etheostoma tuscumbia*), quillwort (*Iosoetes engelmannii*), and yellow water-crowfoot (*Ranunculus flabellaris*).

The WNWR has one of the highest densities of sensitive cultural resource sites in north Alabama. This is despite the fact that only a small percentage of this area has been systematically surveyed for historic properties. Any earth disturbing activities in this area will require oversight by the cultural resource staff of TVA, USFWS and, where appropriate, Redstone Arsenal. The importance of these resources cannot be overstated.

No private shoreline improvements are currently present, and requests for private water use facilities would not be considered.

Table 4−88. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Madison, and Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	68−NW, 68−NE, 68–SE, 68−SW, 69−NW, 75−NW, and 75−SW
TVA D−Stage Map Numbers	189, 190, 195, 196, 200, 201, 203, 204, 206, 207, 210, 211, 212, 214, 215, and 219
Stream Mile and Bank	Tennessee River miles 305−324B
Land Use/Land Cover	Open grasslands, upland forests, bottomland forests, deciduous and pine forests, scrub-shrub wetlands, forested wetlands, freshwater marsh, and mixed pine-hardwood forests
Known Dispersed Recreation Opportunities	Bank fishing, biking, boating, hiking, hunting, primitive camping, photography, and wildlife observation
Current Agreements/Commitments	Term easement to the USFWS for a national wildlife refuge
Potential Projects	Projects as identified by the USFWS Systematic survey for historic properties
Potential Partners	USFWS

Parcel 89 − (5.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Beaver Dam Creek and Piney Creek, tributaries to Tennessee River mile 310.6R, and is encumbered by ROWs for old Alabama SR 20, and Swancott road. Requests for private water use facilities would not be considered.

Table 4−89. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	68–NW and 68−NE
TVA D−Stage Map Numbers	200 and 201
Stream Mile and Bank	TRM 310.6R
Land Use/Land Cover	Road ROW
Known Dispersed Recreation Opportunities	None Identified
Current Agreements/Commitments	Permanent easement to the State of Alabama for a road ROW
Potential Projects	None Identified
Potential Partners	• City of Decatur, Alabama • State of Alabama

---

Parcel 90 − (39.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located to the north of Alternate U.S. Highway 72 and to the south of Airport Road. The land cover is mostly bottomland hardwood forest. No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−90. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	68–NW
TVA D−Stage Map Numbers	196
Stream Mile and Bank	TRM 307L
Land Use/Land Cover	Bottomland hardwood forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Term easement to the USFWS for a national wildlife refuge

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	USFWS

Parcel 91 − (17.2 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel was one of a dozen tracts returned to TVA from USFWS in 1975 (Wheeler Refuge, Contract No. TV-19470A, Supplement No.2). Located on the east side of Rock House Road in South Limestone County, this tract is bisected into two parcels by Towe Road. The northern parcel is covered with small mixed pine and hardwood timber. The eastern boundary of this parcel abuts private property currently in agricultural use. Presently there are no homes immediately adjacent to the TVA property boundary of the northern parcel. The parcel located to the south of Towe Road and east of Rock House Road is currently occupied by five private driveways. Approximately 95 percent of the tract is outside the 100-year flood plain. About 50 percent of this parcel is covered with pole size pine and medium size hardwood trees. Half of this parcel is currently used as extended front yards by the four back-lying property owners located behind TVA's eastern and southern property boundary. Some of the adjacent property owners have multiple driveways over the tract. None of the private drives have been permitted by TVA. The 1995 RLMP recommended this parcel as a candidate for surplus and disposal. There is a high probability for the presence of cultural resources. This area has not been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4−91. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	68−SE
TVA D−Stage Map Numbers	206
Stream Mile and Bank	Beaverdam Creek Mile 2L

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Deciduous forest, private road ROW
Current Agreements/Commitments	Revocable license to the City of Athens for electric utilities

---

Parcel 92 − (17.6 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel was one of a dozen tracts returned to TVA from FWS in 1975, (Wheeler Refuge, Contract No. TV-19470A, Supplement No.2).

Located on the east side of Rock House Road in South Limestone County, the tract is in forest cover dominated by loblolly pine. Scattered pockets of hardwood are also present and are generally restricted to the drains. There are two natural drainage systems which cross the tract. Both drains enter Beaverdam Creek through culverts under Rock House Road. Portions of the tract are within the 100–year flood elevation and are flood prone during extreme high water from Wheeler Reservoir at Beaverdam Creek.

Single family homes are located just behind TVA's eastern back-lying property line. Some of the adjacent property owners have multiple driveways over the tract. The private drives or improvements have been permitted by TVA. The 1995 RLMP recommended this parcel as a candidate for surplus and disposal. There is a high probability for the presence of cultural resources. This area has not been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4−92. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	68−SE
TVA D−Stage Map Numbers	201 and 206
Stream Mile and Bank	Beaverdam Creek Mile 2L
Land Use/Land Cover	Deciduous forest, loblolly pines, private road ROW
Current Agreements/Commitments	Revocable license to the City of Athens for electric utilities

Parcel 93 − (108.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of a series of safety harbors located adjacent to the WNWR. Safety harbors are available for barges and recreational boats during adverse weather conditions or equipment malfunction. Future development of this tract will be restricted, and there is a high probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4−93. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Madison, and Morgan Alabama
Topographic Map (Sheet No. and Quadrant)	68−SW, 68−SE, and 75−SW
TVA D−Stage Map Numbers	201, 202, 208, 210, and 214
Stream Mile and Bank	• Limestone Creek Mile 1.3R • TRM 310.6R (mouth of Limestone Creek) • TRM 313B • TRM 316L • TRM 318.3R • TRM 320.9B • TRM 322L
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	USFWS

Parcel 94 − (6.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located in the Town of Triana, Alabama, at the confluence of Indian Creek and Tennessee River. Access to the parcel is by Record Street. Amenities at the Triana Boat Ramp include a paved boat ramp, parking lot, courtesy pier, and fishing pier. Although managed by the State of Alabama, this parcel is encumbered by a permanent easement to USFWS. The

undeveloped portions of this parcel have a moderate probability for the presence of cultural resources; however, this parcel has not been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−94. Parcel Information

Location Component	Parcel Specific Information
County, State	Madison, Alabama
TVA D−Stage Map Numbers	214
Stream Mile and Bank	TRM 320.9R

Parcel 95 − (1.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is bordered on the north and east by the town park of Triana, Alabama. The western side is bordered by a city street, providing good public access. A wooden frame house is located on the parcel, and the city has requested a land use agreement to provide expansion space for their existing town park. The parcel is not contiguous to the reservoir or Tennessee River, but overlooks the confluence of Indian Creek and the Tennessee River at TRM 321. The State of Alabama maintains a boat ramp and parking lot on the reservoir below this area. This parcel has a high probability for the presence of cultural resources; there are known historic structures on this parcel. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−95. Parcel Information

Location Component	Parcel Specific Information
County, State	Madison, Alabama
TVA D−Stage Map Numbers	214
Stream Mile and Bank	TRM 321R

Parcel 96 − (4.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Barren Fork Creek, a tributary to Indian Creek along the right descending bank of TRM 320.9. This parcel is isolated from the reservoir and encumbered with ROWs for Zierdt Road along the eastern property line and Beadle Lane along the northern property line. Single family homes are located adjacent to the parcel's western property line and an agricultural field is located to the south. The northern portion of the parcel has been cleared for road ROW and potential vegetation encroachments from adjacent property owners. The southern portion of the parcel is covered with scrub hardwood and pole-size pine. There is a moderate probability for the presence of cultural resources.

The parcel was transferred back to TVA from WNWR in 1975 when their boundary policy changed to reflect physical barriers, such as roads. The 1995 RLMP recommended this parcel as a candidate for surplus and disposal. Requests for private water use facilities would not be considered.

Table 4−96. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	75–SW
TVA D−Stage Map Numbers	212 and 213
Stream Mile and Bank	TRM 320.9R
Land Use/Land Cover	Deciduous forest and road ROW
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Madison County, Alabama for a road ROW
Potential Projects	Systematic survey for historic properties
Potential Partners	Madison County, Alabama

Parcel 97 − (4,066.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel encompasses the TVA property allotted for Redstone Arsenal. On November 6, 1941, President Franklin D. Roosevelt approved an agreement among TVA, Department of Interior, and War Department (now the Department of Defense) for the use of lands by the Department of Defense for the creation and future operation of Redstone Arsenal. Additional information about Redstone Arsenal can be found at http://www.garrison.redstone.army.mil/. There is a high probability for the presence of cultural resources. One cave has been reported from this parcel. Five state or federally listed species have been recorded on this parcel, the common barn owl, (*Tyto alba*), bald eagles (*Haliaeetus leucocephalus*), little brown bats (*Myotis lucifugus*), gray bats, and northern long-eared bats. Northern long-eared bats have only been recorded acoustically on this parcel; however, several individuals of this species also have been captured less than 1,000 feet from this parcel. Requests from Redstone Arsenal or an appropriate designee for water use facilities or other structures located on TVA property would be considered.

Table 4−97. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	75–NE, 75–NW, 75–SE, and 75–SW
TVA D−Stage Map Numbers	212, 213, 217, 218, 219, 220, 221, 245, 246, and 247
Stream Mile and Bank	TRM 321.5 to 332R L
Land Use/Land Cover	Deciduous forest, industrial, recreation, and wetlands
Known Dispersed Recreation Opportunities	boat launching and picnic pavilions available to restricted Redstone Arsenal personnel
Current Agreements/Commitments	• Land use agreement with Department of Defense for operation of Redstone Arsenal • Permanent easement to U.S. Fish and Wildlife for Wheeler National Wildlife Refuge
Potential Projects	None identified
Potential Partners	Redstone Arsenal and USFWS

Parcel 98 − (70.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along the right descending bank of Wheeler Reservoir and west of Whitesburg Bridge (U.S. Highway 231/53). The land cover consists of planted loblolly pine and scrub hardwood along the shoreline. There are forested, scrub-shrub, and emergent wetlands found throughout the interior of the parcel. There is a steep and eroding bank along the shoreline. The diverse wildlife habitats support a variety of wetland wildlife, including game and nongame species. It currently receives both big and small game hunting. The state-listed species pocketbook (*Lampsilis ovata*) and federally endangered species pink mucket (*Lampsilis abrupta*) and spectaclecase (*Cumberlandia monodonta*) have been found in the adjacent reservoir. However, no federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−98. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	75−SE
TVA D−Stage Map Numbers	222
Stream Mile and Bank	TRM 332.5R
Land Use/Land Cover	Forested, scrub-shrub, and emergent wetlands; planted loblolly; and scrub hardwood
Known Dispersed Recreation Opportunities	Bank fishing, hiking, and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Potential for greenway, park, and/or wetland education area • Systematic survey for archaeological sites and historic structures
Potential Partners	City of Huntsville, Alabama

Parcel 99 − (74.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along both banks of Aldridge Creek and fronts former TVA property (Tract Nos. XWR-483 and XWR-595). The parcel supports the Ditto Landing Marina development which is operated by the Huntsville-Madison County Port Authority as a public park. Amenities include visitor center, full service campground and marina, bathhouses, restrooms, boat ramp, courtesy dock, fishing pier, picnic area, and trails. There is a high probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−99. Parcel Information

Location Component	Parcel Specific Information
County, State	Madison, Alabama
TVA D−Stage Map Numbers	222
Stream Mile and Bank	• Aldridge Creek Miles 0−1.6B • TRM 333.5R

Parcel 100 − (4.2 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel consists of two small tracts of land adjacent to the Alabama State Docks Terminal. One tract of land is connected to the Aldridge Creek watershed is available for future expansion of the existing barge terminal. The other tract of land is located along the right descending bank of TRM 334 and fronts former TVA property sold to Union Carbine Corporation for an Industrial site and the City of Huntsville, Alabama for a pump station. The larger tract has a moderate probability for the presence of cultural resources. A survey for historic properties is recommended. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4−100. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	75−SE
TVA D−Stage Map Numbers	222
Stream Mile and Bank	TRM 334R
Land Use/Land Cover	Barge terminal, grassland, and pumping station
Current Agreements/Commitments	None identified

Parcel 101 − (11.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of the Tennessee River and is protected by Hobbs Island from commercial navigation traffic. Access is by Hobbs Island Road. Parcel provides for potential expansion for developed recreation facilities within these areas: Madison County Park, Whitesburg Yacht Club, the Rocket City Rowing Club, and Turkey Springs Boat Ramp. TVA transferred this property to Madison County, Alabama for public recreation purposes (Tract No. XTWR-75). The undeveloped portions of the parcel currently support trail activities and dispersed recreation use like bird watching, walking for pleasure and bank fishing. The undisturbed portions of this parcel have a high probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−101. Parcel Information

Location Component	Parcel Specific Information
County, State	Madison, Alabama
TVA D−Stage Map Numbers	222 and 223
Stream Mile and Bank	TRM 334.2−335.4R

Parcel 102 − (55.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the right descending bank of the Tennessee River, northeast of Hobbs Island, and north of Madison County Boat Harbor. The property lies east of Hobbs Island Road and west of the CSX Railroad at Hambrick Slough. The parcel receives a moderate amount of big game hunting as well as a moderate-to-high amount of small game hunting, mostly raccoon and squirrel. Adjacent land uses include residential, industry, agriculture, and forestry. As much as 90 percent of the tract is classified as prime farmland, and some 10 percent of its soils are considered highly erodible. Road and rail access are available nearby, and two boat launching ramps are located in the area.

The interior two-thirds of the parcel has bottomland hardwood cover on wetlands with red maple, sweetgum, and ash dominating. This area also has a cypress plantation that was established about 60 years ago. The outer one-third is occupied by a 50-year-old loblolly pine plantation. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−102. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	75−SE
TVA D−Stage Map Numbers	222 and 223
Stream Mile and Bank	TRM 334.7R
Land Use/Land Cover	Bottomland hardwood forest with scattered tracts of planted loblolly pine
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 103 − (2.5 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along TRM 334.7R, and is encumbered by a ROW for Hegia Burrow Road. Requests for private water use facilities would not be considered.

Table 4−103. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	75–SE
TVA D−Stage Map Numbers	223
Stream Mile and Bank	TRM 334.7R
Land Use/Land Cover	Road ROW
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Madison County, Alabama for a road ROW
Potential Projects	None identified
Potential Partners	None identified

Parcel 104 − (0.3 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel consists of two small tracts of land located along the right descending bank of TRM 335.3. This parcel is adjacent to former TVA property sold to The Norton Company for an industrial site. There is a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4−104. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama

Location Component and Public Involvement Opportunities	Parcel Specific Information
Topographic Map (Sheet No. and Quadrant)	75–SE
TVA D−Stage Map Numbers	223
Stream Mile and Bank	TRM 335.3R
Land Use/Land Cover	Deciduous forest
Current Agreements/Commitments	None identified

Parcel 105 − (6.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small tract is located along the right descending bank of Wheeler Reservoir, just east of Hobbs Island along the secondary navigation channel. It lies just west of Hobbs Island Road near the end of the CSX Railroad (tracks formerly extending to the reservoir have been removed).

The land cover consists of bottomland hardwood forest and planted loblolly pine. The adjacent land uses are primarily industry, agriculture, and forestry. The tract is classified as prime farmland; none of its soils are considered highly erodible.

The Tennessee River from TRM 333.4 to TRM 336.5 (Whitesburg Bridge to the southern, upstream tip of Hobbs Island) is a designated mussel sanctuary. The entire tract fronts a river reach that provides habitat for the pink mucket *(Lampsilis abrupta),* which is listed federally as endangered and as special concern by the state of Alabama. There is an industrial water intake located on this tract at TR 335.4 (right bank). This parcel has not been surveyed for historic properties, but there is known significant archaeological sites nearby. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−105. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	75–SE
TVA D−Stage Map Numbers	223

Location Component and Public Involvement Opportunities	Parcel Specific Information
Stream Mile and Bank	TRM 335.5R
Land Use/Land Cover	Bottomland hardwood forest and planted loblolly pine
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 106 − (42.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This extremely narrow tract is located along the perimeter of Hobbs Island. The land cover consists of scrub hardwood forest along an eroding deposition−soil riverbank. The previous RLMP classified the entire tract as prime farmland. Numerous federally and state-listed aquatic species have been found in the adjacent reservoir. The Tennessee River from TRM 333.4 to TRM 336.5 (Whitesburg Bridge to the southern, upstream tip of Hobbs Island) is a designated mussel sanctuary. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−106. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	75−SE
TVA D−Stage Map Numbers	223
Stream Mile and Bank	TRM 335.5R
Land Use/Land Cover	Scrub hardwood forest along eroding depositions−soil riverbank

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Boundary survey to determine what remains of TVA land
Potential Partners	None identified

Parcel 107 − (6.6 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small parcel is located along the right descending bank of the Flint River at the confluence of the Tennessee River. The land cover consists of primarily bottomland hardwood forest with scattered planted loblolly pine stands. The adjacent land uses are primarily industrial, agriculture, and forestry. The entire tract lies below the 100-year flood elevation and is classified as prime farmland, but the soils are not considered highly erodible. The reservoir and Flint River are impacted by nonpoint pollutants from surrounding lands. The combination with adjacent private agricultural lands and bottomland hardwoods on the tract provides good−to−excellent habitat for a variety of upland small game and nongame wildlife.

Numerous federally and state-listed aquatic species have been found in the adjacent reservoir. The Tennessee River from TRM 333.4 to TRM 336.5 (Whitesburg Bridge to the southern, upstream tip of Hobbs Island) is a designated mussel sanctuary. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−107. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	76–SE

Location Component and Public Involvement Opportunities	Parcel Specific Information
TVA D−Stage Map Numbers	225
Stream Mile and Bank	TRM 339R
Land Use/Land Cover	Bottomland hardwood forest with scattered planted loblolly pines
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for archaeological site integrity
Potential Partners	None identified

Parcel 108 − (3.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of a number of small islands located in the Flint River from river mile 0.4 upstream to river mile 2.1. The land cover consists of forested wetlands. Adjacent land uses are primarily agriculture and forestry. The previous RLMP classified the entire parcel as prime farmland. None of the soils are considered highly erodible. The islands provide good−to−excellent habitat for a variety of wetland wildlife, including wood ducks, wading birds, and mammals that use aquatic habitats. It currently receives a moderate amount of big game hunting, as well as a moderate to high amount of small game hunting, mostly raccoon and squirrel.

No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−108. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	76−SE
TVA D−Stage Map Numbers	227
Stream Mile and Bank	Flint River Mile 1.2B
Land Use/Land Cover	Forested wetland islands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 109 − (279.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel consists of various sized bottomland hardwood, large sawtimber loblolly pine plantations, reverting idle agricultural fields, and wetlands. This parcel receives a considerable amount of small and big game hunting use. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−109. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	82−SW
TVA D−Stage Map Numbers	227
Stream Mile and Bank	Flint River Mile 1.6−3.7R
Land Use/Land Cover	Bottomland hardwood forest with scattered tracts of planted loblolly pine
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 110 − (275.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Muddy Bottoms TVA HPA. The land cover consists of bottomland hardwoods and scrub-shrub wetlands. High-quality, large sawtimber, bottomland hardwood dominates the area with cherrybark and water oak, ash, and hickory the most common species. The parcel can serve as a benchmark for bottomland hardwood forestry research. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−110. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	82−SW
TVA D−Stage Map Numbers	227
Stream Mile and Bank	Flint River Mile 1.6−3.7R
Land Use/Land Cover	Bottomland hardwood with scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Hunting
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Revegetation due to unauthorized all-terrain vehicle abuse • Systematic survey for historic properties
Potential Partners	None identified

Parcel 111 − (7.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is a series of small islands beginning at Flint River Mile 3.9 and extending to approximately mile 6. The land cover consists of forested and scrub-shrub wetlands. No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−111. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	82−SW
TVA D−Stage Map Numbers	226 and 227
Stream Mile and Bank	Flint River Mile 3.9−6B
Land Use/Land Cover	Forested and scrub-shrub wetland islands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 112 − (14.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located on the right descending bank of the Flint River at mile 5 and south of Hobbs Island Road. Madison County, Alabama, has requested a land use agreement for this parcel to provide public access to the Flint River. The property is currently improved with a small parking lot, and access is via Hobbs Island Road. This parcel has a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−112. Parcel Information

Location Component	Parcel Specific Information
County, State	Madison, Alabama
TVA D−Stage Map Numbers	226 and 227
Stream Mile and Bank	Flint River Mile 5R

Parcel 113 − (2.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Flint River Mile 5R, a tributary to Tennessee River mile 339R, and is encumbered by a ROW for Hobbs Island Road. Requests for private water use facilities would not be considered.

Table 4−113. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	82−SW
TVA D−Stage Map Numbers	226
Stream Mile and Bank	• Flint River Mile 5R • TRM 339R
Land Use/Land Cover	Road ROW
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	Permanent easement to Madison County, Alabama for a road ROW

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	None identified
Potential Partners	None identified

Parcel 114 − (40.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located at the uppermost portion of the Flint River embayment including both shoreland and islands. The land cover consists of bottomland hardwood forest and scrub-shrub wetlands. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−114. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	82−SW
TVA D−Stage Map Numbers	226
Stream Mile and Bank	Flint River Mile 5.4R
Land Use/Land Cover	Bank fishing, hunting, and primitive camping
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 115 − (434.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large tract of land is located along the Flint River between river miles 3 and 6. The land cover consists of bottomland hardwood forest with scattered tracts of planted loblolly pine. There is also a forested limestone bluff located at the southern end of the parcel. The previous RLMP classified the entire tract as prime farmland, and the adjacent land use is primarily forestland. This tract receives a considerable amount of small and big game hunting use.

The state-listed species yellowwood (*Cladrastis kentukea*), great yellow wood-sorrel (*Oxalis grandis*), and twinleaf (*Jeffersonia diphylla*) have been found on the parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−115. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	82−SW
TVA D−Stage Map Numbers	227
Stream Mile and Bank	Flint River Mile 3.7L
Land Use/Land Cover	Bottomland hardwood forest, forested limestone bluff, scattered tracts of planted loblolly pines
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 116 − (174.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

The tract is located extends along the right descending bank of the Flint River from near the confluence with the Tennessee River to approximately TRM 2. The land cover consists of bottomland hardwood forest and wetlands. The previous RLMP classified the majority of this parcel as prime farmland. The adjacent land use is primarily agriculture, forestland, and some residential. This parcel receives a considerable amount of small and big game hunting use. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−116. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	75–SE
TVA D−Stage Map Numbers	227 and 228
Stream Mile and Bank	Flint River Mile 1.3L
Land Use/Land Cover	Bottomland hardwood forest
Known Dispersed Recreation Opportunities	Bank fishing and hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 117 − (20.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along the right descending bank of the Tennessee River extending from the Flint River confluence to approximately Flint River Mile 340.2. The land cover consists of scrub hardwood along the riverbank and early successional scrub-shrub adjacent to the riverbank. There are former agricultural license areas that are being managed via natural succession for revegetation. The adjacent land use is primarily agriculture and forestland. The former RLMP classified the entire parcel as prime farmland. No federally or state-listed species or species of special status are known to occur on this parcel. Cultural resources have been identified on this parcel; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−117. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	76–NE
TVA D−Stage Map Numbers	228
Stream Mile and Bank	TRM 339.5R
Land Use/Land Cover	Eroding deposition−soil riverbank, former agricultural fields, and scrub hardwood
Known Dispersed Recreation Opportunities	Bank fishing and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for archaeological sites and historic structures
Potential Partners	None identified

Parcel 118 − (3.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is a safety harbor located at Tennessee River mile 340.5R. Safety harbors are available for barges and recreational boats during adverse weather conditions or equipment malfunction. Future development of this tract will be restricted, and there is a high probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4−118. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	76–NE
TVA D−Stage Map Numbers	228
Stream Mile and Bank	TRM 340.5R
Land Use/Land Cover	Deciduous forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	None Identified
Potential Partners	None identified

Parcel 119 − (51.7 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel stretches along the right descending bank of TRM 340.5 and approximately TRM 342. The land cover consists of hardwood scrub and forest along the shoreline. There is bottomland hardwood wetlands also located along the tributary streams. The previous RLMP classified a large majority of the parcel as prime farmland. Numerous federally and state-listed aquatic species have been found in the adjacent reservoir. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been

conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−119. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	83–NW
TVA D−Stage Map Numbers	229
Stream Mile and Bank	TRM 341.5R
Land Use/Land Cover	Bottomland hardwood wetlands, eroding deposition−soil riverbank, hardwood scrub and forest, and unauthorized vegetation management
Known Dispersed Recreation Opportunities	Bank fishing and primitive camping
Current Agreements/Commitments	None identified

Potential Projects	• Mitigation of unauthorized vegetation management
	  • Placement of TVA property and public lands signs along the parcel boundary and shoreline
	  • Refresh the existing paint denoting TVA's property boundaries
	• Systematic survey for archaeological sites and historic structures

Potential Partners	None identified

Parcel 120 − (20.0 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Clark's Bluff TVA HPA. The HPA stretches along the right descending bank between Clark Hollow and the Paint Rock River. The land cover is upland hardwood forest, limestone bluff, and plateau remnant. The state-listed plant Cumberland rosinweed (*Silphium* brachiatum) has been recently recorded in this parcel. Numerous federally and state-listed aquatic species have been found in the adjacent reservoir, and there is a mussel sanctuary located in the river along this parcel.

The adjacent land use is primarily agriculture and forestland. Nonpoint source water pollution, associated with adjacent land activities, is a concern in the Paint Rock River and within the lake. There are significant cultural resources are also located on this tract. However, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−120. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison, Alabama
Topographic Map (Sheet No. and Quadrant)	83–NW
TVA D−Stage Map Numbers	228
Stream Mile and Bank	TRM 342.5R
Land Use/Land Cover	Limestone bluff, plateau remnant, and upland hardwood forest
Known Dispersed Recreation Opportunities	Hiking and mountain climbing
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for archaeological sites and historic structures
Potential Partners	None identified

Parcel 121 − (148.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located both banks of the Paint Rock River mile 4. The land cover is bottomland hardwood forest and wetlands. Large sawtimber water oak, hickory, and ash dominate the bottomland hardwood that occupies this tract. The adjacent land use is primarily agriculture and forestland. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−121. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison and Marshall, Alabama
Topographic Map (Sheet No. and Quadrant)	83–NW
TVA D−Stage Map Numbers	233
Stream Mile and Bank	Paint Rock River Mile 4.2B
Land Use/Land Cover	Bottomland hardwood forest
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for archaeological sites and historic structures
Potential Partners	None identified

Parcel 122 − (16.8 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This tract is located along the left descending bank at river mile 5 on the Paint Rock River just below the confluence of Little Paint Rock Creek. The land cover is bottomland hardwood forest adjacent to forested limestone bluffs. The adjacent land use is primarily agriculture and forestland. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−122. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Alabama
Topographic Map (Sheet No. and Quadrant)	83–NW
TVA D−Stage Map Numbers	233

Location Component and Public Involvement Opportunities	Parcel Specific Information
Stream Mile and Bank	Paint Rock River Mile 4.7L
Land Use/Land Cover	Bottomland hardwood forest adjacent to forested limestone bluff
Known Dispersed Recreation Opportunities	Hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for archaeological sites and historic structures
Potential Partners	None identified

Parcel 123 − (49.9 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along the right descending bank of the Tennessee River between the confluence of the Paint Rock River and TRM 345. The land cover is scrub hardwood along the shoreline, and forested limestone bluff at the eastern portion of the parcel. The adjacent land use is primarily agriculture and forestland. Numerous federally and state-listed aquatic species have been found in the adjacent reservoir. The state-listed plant Church's wildrye has recently been recorded on this parcel. Significant cultural resources exist on the parcel; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−123. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Madison and Marshall, Alabama
Topographic Map (Sheet No. and Quadrant)	83−NW
TVA D−Stage Map Numbers	230
Stream Mile and Bank	TRM 344R
Land Use/Land Cover	Eroding deposition−soil riverbank, forested limestone bluff, and scrub hardwoods along the shoreline

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for archaeological sites and historic structures
Potential Partners	None identified

Parcel 124 − (5.9 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is a safety harbor located at TRM 345.3R. Safety harbors are available for barges and recreational boats during adverse weather conditions or equipment malfunction. There is a moderate probability for the presence of cultural resources. Future development of this tract will be restricted, and requests for private water use facilities would not be considered.

Table 4−124. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Alabama
Topographic Map (Sheet No. and Quadrant)	83−NW
TVA D−Stage Map Numbers	230
Stream Mile and Bank	TRM 345.3R
Land Use/Land Cover	Agriculture and grassland
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Restore shoreline vegetation
Potential Partners	Adjacent private property owner

Parcel 125 − (49.2 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along the right descending bank of the Tennessee River between TRM 345.3 and the Guntersville Dam reservation. The land cover is scrub hardwood along the shoreline and eroding deposition−soil riverbank. The adjacent private land use is primarily agriculture. Numerous federally and state-listed aquatic species have been found in the adjacent mussel sanctuary. However, no federally or state-listed species or species of special status are known to occur on this parcel. There are existing cultural resources present on the parcel; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−125. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Alabama
Topographic Map (Sheet No. and Quadrant)	83–NW
TVA D−Stage Map Numbers	231
Stream Mile and Bank	TRM 346.3R
Land Use/Land Cover	Eroding deposition−soil riverbank and scrub hardwoods
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for archaeological sites and historic structures
Potential Partners	None identified

Parcel 126 − (62.2 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located immediately downstream of Guntersville Dam reservation and extends to the confluence of Shoal Creek. The land cover is bottomland hardwood forest. This section of Wheeler Reservoir is more riverine and is heavily influenced by releases from Guntersville Dam. Numerous federally and state-listed aquatic species have been found in the adjacent mussel sanctuary. However, no federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources on the parcel; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−126. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Alabama
Topographic Map (Sheet No. and Quadrant)	83–NW
TVA D−Stage Map Numbers	231
Stream Mile and Bank	TRM 348L
Land Use/Land Cover	Bottomland hardwood forest
Known Dispersed Recreation Opportunities	Hiking and hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 127 − (3.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the right descending bank of Shoal Creek. The tract has poor (dirt) road access across private land. Water access is also difficult because of the shallow stream depth and vegetation growth constricting the channel at some locations. The previous RLMP classified over 90 percent of the parcel as prime farm land. The rich bottom land soils found on the tract support large species of pine and hardwood trees. A grove of large American beach trees offer a scenic area popular with those seeking a primitive campsite near the water.

Numerous federally and state-listed aquatic species have been found in the adjacent reservoir. No federally or state-listed species or species of special status are known to occur on this parcel. There is a low probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−127. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Alabama
Topographic Map (Sheet No. and Quadrant)	83–NW
TVA D−Stage Map Numbers	231
Stream Mile and Bank	Shoal Creek Mile 1.0R
Land Use/Land Cover	Hardwood forest
Known Dispersed Recreation Opportunities	Hiking and hunting
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 128 − (1.1 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Shoal Creek, a tributary to TRM 347.2L, and is encumbered by a transmission line ROW. There is a moderate probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4−128. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Alabama
Topographic Map (Sheet No. and Quadrant)	83–NW
TVA D−Stage Map Numbers	231
Stream Mile and Bank	Shoal Creek Mile 1.0R
Land Use/Land Cover	transmission line ROW
Known Dispersed Recreation Opportunities	None Identified
Current Agreements/Commitments	None Identified
Potential Projects	Survey for historic properties
Potential Partners	None Identified

Parcel 129 − (103.1 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This narrow parcel is located along the left descending bank of the Tennessee River between river miles 343.6 and 347. The land cover is bottomland hardwood forest, and the adjacent land use is primarily agriculture and forestland. There are significant cultural resources sites located on and adjacent to this tract. A nineteenth-century rural farm community, formerly occupied by Cherokee Indians led by Chief Parches, is located adjacent to the tract. Significant remains of both communities are located throughout the countryside. Water quality is a concern in this section of the reservoir because of organic enrichment and low-dissolved oxygen.

Numerous federally and state-listed aquatic species have been found in the adjacent reservoir. No federally or state-listed species or species of special status are known to occur on this

parcel. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−129. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Alabama
Topographic Map (Sheet No. and Quadrant)	83–NW
TVA D−Stage Map Numbers	230
Stream Mile and Bank	TRMs 343.6−347L
Land Use/Land Cover	Scrub hardwood and planted loblolly pine
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 130 − (291.6 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This narrow parcel is the Clarksville Mountain TVA HPA. It stretches along the left descending bank of the Tennessee River between river miles 339 and 343.6. The land cover is scrub hardwood forest and loblolly pine along the shoreline with eroding deposition−soil riverbank. The western portion of the parcel is a forested limestone bluff and plateau remnant mountain. Bottomland hardwood forests with scattered loblolly pines are located along Cane Creek. It currently receives a moderate amount of big game hunting, and a moderate−to−high amount of small game hunting, mostly raccoon and squirrel.

Numerous federally and state-listed aquatic species have been found in the adjacent reservoir. Two state-listed plant occur on this parcel, smooth belphilia *(Belphilia subnuda*) and American beakgrain *(Diarrhena americana*). There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There

are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−130. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Alabama
Topographic Map (Sheet No. and Quadrant)	76–NE
TVA D−Stage Map Numbers	228
Stream Mile and Bank	TRM 339−343.6L
Land Use/Land Cover	Planted loblolly pine and scrub hardwood forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 131 − (59.9 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This narrow tract is located along the left descending bank of the Tennessee River between miles 337.5 and 339. The land cover consists of mixed hardwood and loblolly pine along the shoreline. There is a forested limestone bluff located along the back edge of the property.

Numerous federally and state-listed aquatic species have been found in the adjacent reservoir. Three state-listed plants occur on this parcel, Church's wildrye (*Elymus churchii*), smooth belphilia (*Belphilia subnuda*), and limestone adder's-tongue (*Ophioflossum engelmannii*). There is a moderate probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−131. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Marshall, Alabama
Topographic Map (Sheet No. and Quadrant)	76–SE
TVA D−Stage Map Numbers	224
Stream Mile and Bank	TRM 337.5−339L
Land Use/Land Cover	Forested limestone bluff, loblolly pine, and mixed hardwood forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 132 − (73.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along the left descending bank of the Tennessee River and stretches from approximately TRM 334 to 337.5. The land cover consists of mixed hardwood and loblolly pine along the shoreline. There are areas of cleared vegetation and active vegetation management from back-lying property owners in the vicinity of Hobbs Island. The Tennessee River from TRM 333.4 to TRM 336.5 (Whitesburg Bridge to the southern, upstream tip of Hobbs Island) is a designated mussel sanctuary. Numerous federally and state-listed aquatic species have been found in the adjacent reservoir. However, no federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−132. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75−SE
TVA D−Stage Map Numbers	223
Stream Mile and Bank	TRMs 334.1−337.6L
Land Use/Land Cover	Mixed hardwood, loblolly pine, and unauthorized vegetation management
Known Dispersed Recreation Opportunities	Bank fishing and reservoir access
Current Agreements/Commitments	None identified

Potential Projects	• Mitigation of unauthorized vegetation management
	  • Placement of TVA property and public lands signs along the parcel boundary and shoreline
	  • Refresh the existing paint denoting TVA's property boundaries
	• Systematic survey for historic properties

Potential Partners	None identified

Parcel 133 − (4.0 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel consists of a small tract of land located along the left descending bank of TRM 334. This parcel is encumbered with an easement to Rogers Group, LLC for a barge terminal. A narrow portion of this parcel has been cleared for the presence of cultural resources through phase II testing. The northwest portion of the tract has a high probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4−133. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75−SE
TVA D−Stage Map Numbers	222

Location Component and Public Involvement Opportunities	Parcel Specific Information
Stream Mile and Bank	TRM 334L
Land Use/Land Cover	Barge terminal
Current Agreements/Commitments	Term easement to Rogers Group, LLC for a barge terminal

---

Parcel 134 − (6.3 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along the left descending bank of the Tennessee River between Whitesburg Bridge and TRM 334. The land cover consists of scrub hardwood forest and loblolly pine along the shoreline and eroding deposition−soil riverbank. The Tennessee River from TRM 333.4 to TRM 336.5 (Whitesburg Bridge to the southern, upstream tip of Hobbs Island) is a designated mussel sanctuary. Numerous federally and state-listed aquatic species have been found in the adjacent reservoir. However, no federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−134. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75−SE
TVA D−Stage Map Numbers	222
Stream Mile and Bank	TRM 333.5L
Land Use/Land Cover	Eroding deposition−soil riverbank, loblolly pine, and scrub hardwood forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 135 − (1.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along TRM 333.3L, and is encumbered by a ROW for Alabama SR 53 and U.S. Highway 231. Requests for private water use facilities would not be considered.

Table 4−135. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75–SE
TVA D−Stage Map Numbers	222
Stream Mile and Bank	TRM 333.3L
Land Use/Land Cover	Road ROW
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Permanent easement to the State of Alabama for a road right–of–way
Potential Projects	None identified
Potential Partners	State of Alabama

Parcel 136 − (62.7 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This long, narrow, shoreline tract is located along the left descending bank of the Tennessee River extending between TRM 330.7 and the Whitesburg Bridge. The previous RLMP classified

the entire tract as prime farmland. The land cover is scrub hardwood and loblolly pine along the shoreline with an eroding deposition−soil riverbank. Upland wildlife habitat is considered fair for a variety of small game and nongame species. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−136. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75–SE
TVA D−Stage Map Numbers	220
Stream Mile and Bank	TRM 330.7−333.2L
Land Use/Land Cover	Eroding deposition−soil riverbank, loblolly pine, and scrub hardwood forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 137 − (342.6 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along the left descending bank of the Tennessee River and extends between TRM 329 and 330.7. The land cover is bottomland hardwood forest with large tracts of planted loblolly pine. Forested and scrub-shrub wetlands occur in addition to ecologically diverse wildlife habitats that support a variety of wetland wildlife, including game and nongame species. It currently receives a moderate amount of big game hunting as well as a moderate−to−high amount of small game hunting, mostly raccoon and squirrel.

Adjacent land use is primarily agriculture and forestry. No federally or state-listed species or species of special status are known to occur on this parcel. There are potentially significant cultural resources found on this parcel; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−137. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75–SE
TVA D−Stage Map Numbers	220
Stream Mile and Bank	TRM 329−330.7L
Land Use/Land Cover	Bottomland hardwood forest with large tracts of planted loblolly pine
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 138 − (122.8 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This relatively large tract is located on the left descending bank of the Tennessee River at TRM 328.2 and along the left descending bank of Dry Creek. Forested and scrub-shrub wetlands occur in addition to ecologically diverse wildlife habitats that support a variety of game and nongame species. Much big and small game hunting occurs here. Bottomland hardwood is the dominant forest condition and includes multiple age classes of sweetgum, ash, red oak, willow oak, and hickory. The adjacent land use is primarily agriculture and forestry. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of significant cultural resources; however, a comprehensive

archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−138. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75–SW
TVA D−Stage Map Numbers	221 and 246
Stream Mile and Bank	TRM 327.6−328.2L
Land Use/Land Cover	Bottomland hardwood forest and forested and scrub-shrub wetlands
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 139 − (3.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Management

This small linear tract is located below the 560-foot msl contour. The land cover is scrub hardwood and planted loblolly pine forest along an eroding deposition−soil riverbank. This parcel fronts former TVA property sold without egress and ingress rights. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−139. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75−SW
TVA D−Stage Map Numbers	246
Stream Mile and Bank	TRM 327.7L
Land Use/Land Cover	Eroding deposition−soil riverbank, planted loblolly pine, scrub hardwood forest
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries
Potential Partners	None identified

Parcel 140 − (3.8 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is a safety harbor located at TRM 327.3L. Safety harbors are available for barges and recreational boats during adverse weather conditions or equipment malfunction. There is a high probability for the presence of cultural resources. Future development of this tract will be restricted, and requests for private water use facilities would not be considered.

Table 4−140. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75−SW
TVA D−Stage Map Numbers	246
Stream Mile and Bank	TRM 327.3L
Land Use/Land Cover	Deciduous forest and pines
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	Survey for historic properties
Potential Partners	None identified

Parcel 141 − (46.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This noncontiguous parcel is located along the left descending bank of the Tennessee River and stretches from approximately TRM 325.5 to 327. The entirety of the parcel fronts former TVA property that was sold without the rights for water use facilities. The land cover along the Tennessee River is scrub hardwood forest with an eroding deposition−soil riverbank. The parcel also includes property surrounding two small inlets. The land cover in those areas includes forested and scrub-shrub wetlands. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−141. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75–SW
TVA D−Stage Map Numbers	246
Stream Mile and Bank	TRM 325.5−327L
Land Use/Land Cover	Eroding deposition−soil riverbank, planted loblolly pine, scrub hardwood forest
Known Dispersed Recreation Opportunities	Hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 141a − (0.5 acre)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River and encompassed by Parcel 141. The parcel begins at Johnson Landing Road and follows the 560-foot msl contour downstream for approximately 551 feet. The Morgan County, Alabama, tax parcel 09-03-05-0-000-004.001 is located behind this parcel. There is a high probability for cultural resources, but the parcel has not been surveyed for historic properties. One water use facility has been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4−141a. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75−SW
TVA D−Stage Map Numbers	246
Stream Mile and Bank	TRM 326.9L
Land Use/Land Cover	Maintained lawn
Fronts Former TVA Tract (s)	XWR−313
Structure Profile	576-foot msl contour
Current Agreements/Commitments	Approved water use facility

Parcel 142 − (15.0 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This small tract is located along the left descending bank of the Tennessee River between TRM 325 and 325.5. The land cover is composed of fractured limestone boulders, is typically dry, and contains some areas of cedar-hardwood forest with a diverse shrub and ground plant understory. Wildlife habitats support a variety of small game and nongame species, Including birds and reptiles. Lewis Bluff has good access from a county road, and a dirt parking area is

available for informal recreational users. A trail leads from the parking area to a medium high bluff that provides a long view of the reservoir.

No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−142. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75–SW
TVA D−Stage Map Numbers	219
Stream Mile and Bank	TRM 325.3L
Land Use/Land Cover	Limestone bluff with mixed hardwood and loblolly pine forest
Known Dispersed Recreation Opportunities	Hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 143 − (1.1 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is isolated from the reservoir. It is located northeast of the Grindle Hole (Cotaco Creek) and Sharps Fords Bridge. The parcel is located on the south side of the road and is covered in pine trees. There is a moderate probability for the presence of cultural resources, and a potential project would be surveying the parcel for historic properties.

The 1995 RLMP recommended this parcel as a candidate for surplus and disposal. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4−143. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75–SW
TVA D−Stage Map Numbers	215
Stream Mile and Bank	• Cotaco Creek Mile 1.8R • TRM 319.1L
Land Use/Land Cover	Pine trees
Current Agreements/Commitments	None identified

Parcel 144 − (724.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large tract includes both sides of Cotaco Creek and the islands from mile 1.9 (Sharps Ford Bridge) to 5.8. A diversity of forest types and age classes characterize this tract; bottomland hardwood (cherrybark and water oak, sweetgum, and hickory) dominates over one-half of the area and is located along the creek, where highly productive soils prevail. Upland hardwood and loblolly pine are found in pure and mixed stands on the upper slopes and ridges where soils are medium in productivity. Over 50 acres of planted loblolly pine still remain on the tract.

Several factors provide for an abundance of wildlife habitat on this tract: diverse topography and forest cover, desirable flooding regime, and the remoteness of the area. Wheeler Refuge lies immediately downstream and, although hunting is permissible on TVA lands, the tract provides additional wintering habitat for migratory waterfowl. Wood ducks use the riparian zones for nesting and brood rearing, while such wintering waterfowl as mallards and black ducks use substantial quantities of oak mast as a food source. Flooded bottoms also provide habitat for mammals that use aquatic habitats species such as beaver, mink, muskrat, and raccoon. Much big and small game hunting occurs here, including waterfowl hunting.

The state-listed species bald eagle (*Haliaeetus leucocephalus*) actively nests on this parcel. A cave also occurs on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−144. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75–SW
TVA D−Stage Map Numbers	215 and 216
Stream Mile and Bank	Cotaco Creek Mile 2.9B
Land Use/Land Cover	Bottomland hardwood forest with scattered tracts of planted loblolly pine
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 145 − (59.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located on both sides of Cotaco Creek between stream miles 5.8 and 6.4. The old Grantland Bridge dissects the parcels. A developed stream access site at this location would provide additional recreation opportunities for paddle sports, fishing and hunting as paddlers traverse approximately five miles to the WNWR boat ramp at Sharps Ford Bridge.

This parcel has a moderate probability for the presence of cultural resources, and a systematic surveyed for historic properties should occur. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−145. Parcel Information

Location Component	Parcel Specific Information
County, State	Morgan, Alabama
TVA D−Stage Map Numbers	216
Stream Mile and Bank	Cotaco Creek Mile 5.8B

Parcel 146 − (91.6 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Cotaco Creek TVA SWA. The property extends from approximately Cotaco Creek Mile 6.4 to 7.1 (Lower Bridge Road Bridge). Mature, large sawtimber upland hardwood that exceed 120-years in age dominates the area, with white, scarlet, and black oak and hickory prevailing on the drier, upper slopes and yellow-poplar and northern red oak on the rich coves and north-facing slopes. A 50-year-old loblolly pine plantation is situated on the southern portion of the tract and totals about 13 acres. Exposed limestone shelves and possibly a cave entrance are prominent geological features. A diversity of wildflowers, including wild geranium, wood betony, trillium, false Solomon's seal, and pipsissewa enhances the natural beauty of this area. An informal trail meanders along the creek and provides access for fishermen.

No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−146. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75–NW
TVA D−Stage Map Numbers	216
Stream Mile and Bank	Cotaco Creek Mile 6.4B
Land Use/Land Cover	Bottomland hardwood forest with limestone bluffs and scattered tracts of planted loblolly pine
Known Dispersed Recreation Opportunities	Hiking and hunting

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 147 − (4.5 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Cotaco Creek, a tributary to TRM 319.1L, and is encumbered by a ROW for Upper River Road. Requests for private water use facilities would not be considered.

Table 4−147. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	76–NW
TVA D−Stage Map Numbers	216 and 253
Stream Mile and Bank	• Cotaco Creek Mile 7.1B • TRM 319.1L
Land Use/Land Cover	Road right–of–way
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Permanent easement to the Morgan County, Alabama for a road ROW
Potential Projects	None identified
Potential Partners	Morgan County, Alabama

Parcel 148 − (425.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel consists of shoreland and islands along both banks of Cotaco Creek. It is bordered on the north by Lower River Road and on the south by U.S. Highway 36. The land cover is dominated by forested wetlands, bottomland hardwoods, and some stands of mature loblolly pine. Wildlife habitats, including riparian zones, are good−to−excellent for a variety of species, including wood ducks and other waterfowl, wading birds, and mammals that use aquatic habitats ; and forest management opportunities are exceptional, particularly within the higher-quality, mature hardwood and pine stands. Much big and small game hunting occurs here. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−148. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	76–NW
TVA D−Stage Map Numbers	253
Stream Mile and Bank	Cotaco Creek Mile 8.1B
Land Use/Land Cover	Bottomland hardwood forest with scattered tracts of planted loblolly pine
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 149 − (4.5 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Cotaco Creek, a tributary to TRM 319.1L, and is encumbered by ROWs for U.S. Highway 36, Red Oak Road, and a TL. Requests for private water use facilities would not be considered.

Table 4−149. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	76–NW
TVA D−Stage Map Numbers	254
Stream Mile and Bank	• Cotaco Creek Mile 11B • TRM 319.1L
Land Use/Land Cover	Road ROW
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easement to the Morgan County, Alabama for a road right–of–way • Permanent easement to Joe Wheeler Electric Membership Cooperative for electric utilities
Potential Projects	None identified
Potential Partners	Morgan County, Alabama

Parcel 150 − (4.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Cotaco Creek with its northern boundary as U.S. Highway 36. The property provides an opportunity to develop stream access to Cotaco Creek for paddles sports, float fishing, and hunting. Joe Wheeler Electric Membership Cooperative currently has an easement for use of a portion of this property. This parcel has moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−150. Parcel Information

Location Component	Parcel Specific Information
County, State	Morgan, Alabama
TVA D−Stage Map Numbers	254
Stream Mile and Bank	Cotaco Creek Mile 11.2R

Parcel 151 − (165.7 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel encompasses both sides of Cotaco Creek and stretches from approximately mile 10.3 to 11. The tract is dominated by forested wetlands, bottomland hardwoods, and some stands of mature loblolly pine. Wildlife habitats, including riparian zones, are good to excellent for a variety of species, including wood ducks and other waterfowl, wading birds, and wetland mammals that use aquatic habitats, and forest management opportunities are exceptional, particularly within the higher-quality mature hardwood and pine stands. Much big and small game hunting occurs here.

There is a large, two-story, early nineteenth century house adjacent to this tract, which was restored in the early 1990's. It once served as the county courthouse before the county seat was moved to Somerville. Other surrounding structures include early twentieth-century farmhouses.

No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−151. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	76−NW
TVA D−Stage Map Numbers	254
Stream Mile and Bank	Cotaco Creek Mile 10.3−11B
Land Use/Land Cover	Bottomland hardwood and pine forest

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 152 − (182.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located at the uppermost reach of the Cotaco Creek embayment. The land cover is dominated by forested wetlands, bottomland hardwoods, and some stands of mature loblolly pine. Wildlife habitats, including riparian zones, are good to excellent for a variety of species, including wood ducks and other waterfowl, wading birds, and mammals that use aquatic habitats, and forest management opportunities are exceptional, particularly within the higher-quality mature hardwood and pine stands. Much big and small game hunting occurs here. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−152. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	76–NW
TVA D−Stage Map Numbers	254
Stream Mile and Bank	Cotaco Creek Mile 11.1B
Land Use/Land Cover	Bottomland hardwood forest
Known Dispersed Recreation Opportunities	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 153 − (6.3 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This small parcel consists of three noncontiguous tracts of land located along Town Creek. The land cover consists of bottomland hardwood forest and wetlands. Wildlife habitats, including riparian zones, are good−to−excellent for a variety of species, including wood ducks and other waterfowl, wading birds, and mammals that use aquatic habitats. It currently receives a moderate amount of big game hunting as well as a moderate−to−high amount of small game hunting, mostly raccoon and squirrel. No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−153. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	76–NW
TVA D−Stage Map Numbers	253 and 254
Stream Mile and Bank	Town Creek Mile 1.3L
Land Use/Land Cover	Bottomland hardwood forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 154 − (2.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of two noncontiguous tracts of land that were transferred back to TVA from USFWS, WNWR. The land cover is mixed pine and hardwood forest with some vegetation management from the back-lying property owners. No federally or state-listed species or species of special status are known to occur on this parcel. There is a low probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−154. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	75−SW
TVA D−Stage Map Numbers	211 and 215
Stream Mile and Bank	Cotaco Creek Mile 1.8L
Land Use/Land Cover	Mixed pine and hardwood forest with unauthorized vegetation management
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information

Potential Projects	• Mitigation for unauthorized vegetation management
	  • Placement of TVA property and public lands signs along the parcel boundary and shoreline
	  • Refresh the existing paint denoting TVA's property boundaries
	• Survey for historic properties

Potential Partners	None identified

Parcel 155 − (14.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of two noncontiguous tracts of land located along Alabama SR 67 (Point Mallard Parkway). The land cover is mixed hardwood and pine forest. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−155. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	68−SW
TVA D−Stage Map Numbers	199
Stream Mile and Bank	Flint Creek Mile 4.5R
Land Use/Land Cover	Mixed hardwood and pine forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 156 − (25.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is comprised of multiple disjointed pieces of property located along five locations along Flint Creek, a tributary to Tennessee River mile 308.4L. This parcel is encumbered by ROWs for U.S. Highway 31, Alabama SR 3, and Norris Mill Road. Requests for private water use facilities would not be considered.

Table 4−156. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	68–SW and 69–NW
TVA D−Stage Map Numbers	192, 193, 194, and 195
Stream Mile and Bank	• West Flint Creek Mile 1.8B • Flint Creek Miles 8L, 9L, 10.2L, and 13.5 • Tennessee River mile 308.4L
Land Use/Land Cover	Road ROW
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easement to the Morgan County, Alabama for a road right–of–way • Permanent easements to the State of Alabama for a road right–of–way
Potential Projects	None identified
Potential Partners	• Morgan County, Alabama • State of Alabama

Parcel 157 − (4.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of Flint Creek with U.S. Highway 31 as the east boundary and access by Bowles Bridge Road. This parcel is encumbered with a permanent easement to the State of Alabama for public recreation purposes. It is improved with an access road, parking lot, and boat ramp. This parcel has a moderate probability for the

presence of cultural resources in undisturbed areas. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−157. Parcel Information

Location Component	Parcel Specific Information
County, State	Morgan, Alabama
TVA D−Stage Map Numbers	195
Stream Mile and Bank	Flint Creek Mile 13.4−13.8R

Parcel 158 − (132.8 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the Anvil Cave TVA HPA. The land cover consists of bottomland hardwood forest aging approximately 100 years with back-lying limestone bluff. Anvil Cave is recognized as a significant geologic feature by the National Natural Landmark Program (administered by the National Park Service). The cave is the best developed and most complex maze cave in the U.S. and the longest maze cave in the eastern U.S. There are reportedly seven entrances to the cave, with one or more located on this parcel. The state-listed southern cavefish (*Typhlichthys subterraneous*) and ground beetle (*Pseudanophthalmus distinguens*) have been found on this parcel. The cave is not suitable for developed public use because of its sensitive habitat and it is considered dangerous. The area downstream from the cave is geologically scenic and has an abundance of spring wildflowers.

There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−158. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	69–NW
TVA D−Stage Map Numbers	195
Stream Mile and Bank	Flint Creek Mile 13.8−16.9R

Location Component and Public Involvement Opportunities	Parcel Specific Information
Land Use/Land Cover	Bottomland hardwood forest and forested limestone bluff
Known Dispersed Recreation Opportunities	Hiking, hunting, primitive camping, and spelunking
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 159 − (39.5 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the right descending bank of Flint Creek. The land cover consists of scattered hardwood and pine forests, seasonally flooded timber, and scrub shrub wetlands. The rock bluffs along the river bank of this tract are very important to the scenic beauty of this section of Flint Creek. Because these bluffs are located in the bend of the river, they also provide a landmark to both upstream and downstream travelers on the river.

No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−159. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	69–NW
TVA D−Stage Map Numbers	195 and 250
Stream Mile and Bank	Flint Creek Mile 16.9−17.9R
Land Use/Land Cover	Mixed hardwood and pine forest

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	Hiking, hunting, primitive camping, and spelunking
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 160 − (11.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is comprised of multiple disjointed pieces of property located along No Business Creek and Flint Creek, tributaries to TRM 308.4L. This parcel is encumbered by ROWs for U.S. Highway 36, Forest Chapel Road, and Vaughn Bridge Road. Requests for private water use facilities would not be considered.

Table 4−160. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	69–NW
TVA D−Stage Map Numbers	250
Stream Mile and Bank	• No Business Creek Mile 1B • Flint Creek Miles 17B and 20B • Tennessee River mile 308.4L
Land Use/Land Cover	Road ROWs
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	Permanent easements to the Morgan County, Alabama for a road right–of–way
Potential Projects	None identified
Potential Partners	Morgan County, Alabama

Parcel 161 − (614.9 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel encompasses all of the TVA property from Flint Creek mile 18 to 22 with the exception of road crossings and Parcel 162 (Developed Recreation). The land cover consists of bottomland hardwood and pine forest, wetlands, and steep limestone bluffs along the creek.

Hardwoods make up more than half of the forest resource, with upland species dominant on the slopes and drier sites and bottomland species on the bottoms. Also present are scattered, mixed pine-hardwood and pure pine stands. Because of the diverse forest types and the natural flooding regime, capability for wildlife management is excellent. Native and wintering waterfowl are prominent in the flooded areas, and mammals that use aquatic habitats are found in the riparian habitats. White-tailed deer and gray squirrel are also present in good numbers.

From Flint Creek mile 20 to 22, there are a diversity of forest types is present; however, bottomland hardwood, which occupies the richer sites along the creek bottom, comprises the largest segment. The upper slopes are characterized by upland hardwood, upland hardwood-pine mixtures, and scattered pure pine stands. The forest age structure varies from large mature trees that range from 75 to 115 years old to younger trees of pole size. Wintering waterfowl use this flood prone area for foraging, while other species, such as wood ducks, nest and raise their broods along the creek. The natural flooding regime and bottomland hardwood provide excellent wetland wildlife habitat for species such as beaver, muskrat, mink, and raccoon. Good populations of gray squirrel and white-tailed deer are also present on the tract.

Along No Business Creek, most of the forest averages about 80 years old. The bottomland hardwood on this portion of the parcel is important to many different types of wildlife. Periodic flooding in the lowland areas provides excellent nesting and brood rearing habitat for wood ducks, and wintering waterfowl use these areas for foraging mast. Wetland species, such as beaver, mink, muskrat, and raccoon, are also plentiful along this flood prone portion of the parcel, as are white-tailed deer and gray squirrel. Scattered stands of loblolly pine and upland hardwood provide habitat diversity, which is very important to wildlife species. Much big and small game hunting occurs here.

No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a

comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−161. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	69–NW
TVA D−Stage Map Numbers	250
Stream Mile and Bank	• Flint Creek Miles 18−22B • Crowdabout Creek Miles 0−1B • No Business Creek Miles 0−2B
Land Use/Land Cover	Bottomland hardwood forest and steep limestone bluffs
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 162 − (12.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Flint Creek and downstream of Woodall Bridge (Alabama SR 36). The topography and access to the parcel provides an opportunity to develop a public stream access for paddle sports, float fishing, and hunting. The Flint Creek corridor lends itself to future development of a Blueway by connecting various public lands and boat ramps sites. The undisturbed portions of this parcel have a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−162. Parcel Information

Location Component	Parcel Specific Information
County, State	Morgan, Alabama
TVA D−Stage Map Numbers	250
Stream Mile and Bank	Flint Creek Mile 20L

Parcel 163 − (7.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Flint Creek and is adjacent to Vaughn Bridge Road which provides access. The topography and access would support development for public stream access. A portion of the parcel is encumbered by a revocable license to Morgan County, Alabama for public recreation. The Flint Creek corridor lends itself to future development of a Blueway by connecting various public lands and boat ramps sites. This parcel has a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−163. Parcel Information

Location Component	Parcel Specific Information
County, State	Morgan, Alabama
TVA D−Stage Map Numbers	250
Stream Mile and Bank	Flint Creek Mile 17.9L

Parcel 164 − (39.7 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of the Flint Creek. The land cover is mixed hardwood and pine forest. The forest cover is dominated by planted loblolly pine; however, some upland and bottomland hardwood is present. No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted.

There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−164. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	69–NW
TVA D−Stage Map Numbers	195 and 250
Stream Mile and Bank	Flint Creek Miles 16.5−17.8L
Land Use/Land Cover	Mixed hardwood and pine forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 165 − (27.2 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is the English Ivy TVA SWA stretching along the left descending bank between Flint Creek miles 15.8 to 16.5. The land cover is hardwood forest limestone bluff with bottomland hardwood forest along the creek. No federally or state-listed species or species of special status are known to occur on this parcel, however a cave is known immediately adjacent to this parcel (60 feet). There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−165. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	69–NW
TVA D−Stage Map Numbers	249
Stream Mile and Bank	Flint Creek Miles 15.8−16.5L
Land Use/Land Cover	Hardwood forest and limestone bluff
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 166 − (119.4 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of Flint Creek. The land cover consists of mixed hardwood and pine forest with bottomland hardwood forest along some portions of the creek. Typical tree species found on the creek floodplain are water, willow, and cherrybark oak, sweetgum, ash, and red maple, while the upland areas are forested in white oak, southern red oak, and hickory. Much of the hardwood is at or approaching maturity and ranges from 70 to 115 years old. A variety of wildlife species inhabit and use these diverse forest conditions. Waterfowl and mammals that use aquatic habitats are prevalent on the more flood prone areas, while healthy populations of white-tailed deer and gray squirrel occur in moderate numbers on both the upland and bottomland areas.

No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−166. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	69–NW
TVA D−Stage Map Numbers	195 and 249
Stream Mile and Bank	Flint Creek Mile 13.6−15.8L
Land Use/Land Cover	Mixed hardwood and pine forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 167 − (4.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of West Flint Creek at the confluence of Flint Creek. Bowles Bridge Road serves as the parcel's southern boundary and is access to the parcel. The parcel is encumbered by a permanent easement to the State of Alabama for public recreation purposes. Although the parcel is unimproved, the property provides an area for dispersed recreation use including bank fishing, primitive camping and hand launch stream access. This parcel has a high probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−167. Parcel Information

Location Component	Parcel Specific Information
County, State	Morgan, Alabama
TVA D−Stage Map Numbers	195
Stream Mile and Bank	West Flint Creek Mile 0−0.3R

Parcel 168 − (717.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel includes all of the TVA property located along and the islands within West Flint Creek. The road crossings are not included within this parcel. The land cover consists of bottomland hardwood forest with scattered tracts of planted loblolly pines and wetlands.

The bottomland hardwood on this tract is important to many different types of wildlife. Periodic flooding in the lowland areas provides excellent nesting and brood-rearing habitat for wood ducks, and wintering waterfowl use these areas for foraging mast. Such wetland species as beaver, mink, muskrat, and raccoon are also plentiful along this flood prone tract, as well as white-tailed deer and gray squirrel. Scattered stands of loblolly pine and upland hardwood provide habitat diversity, which is very important to wildlife species. A large amount of big and small game hunting occurs here.

No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−168. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	69–SW
TVA D−Stage Map Numbers	193, 194, 195, and 249
Stream Mile and Bank	• Flint Creek Mile 13.5L • West Flint Creek Miles 0−4B
Land Use/Land Cover	Bottomland hardwood forest with scattered tracts of planted loblolly pine
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Survey for historic properties
Potential Partners	None identified

Parcel 169 − (3.6 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is isolated from the reservoir. The northern boundary of the parcel runs along a drainage ditch that empties into Flint Creek. The eastern boundary has suitable road access fronting U.S. Highway 31, three miles south of Alabama SR 31. An existing railroad line runs behind the tract to the west. A transmission line crosses the southern portion of the parcel, and the southern boundary abuts private property currently used for an automotive salvage yard, near the southern boundary. There is a moderate probability for the presence of cultural resources, and a possible project would be surveying the parcel for historic properties.

The 1995 RLMP recommended this parcel as a candidate for surplus and disposal. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4−169. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	68−SW
TVA D−Stage Map Numbers	193
Stream Mile and Bank	Flint Creek Mile 10.2L
Land Use/Land Cover	Pine trees and scrub-shrub vegetation
Current Agreements/Commitments	Permanent easement to the State of Alabama for a road ROW

Parcel 170 − (2.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Flint Creek, tributaries to TRM 308.4L. A portion of the parcel is encumbered by a ROW for County Club Road. There is a low probability for cultural resources due to extensive ground disturbance. Requests for private water use facilities would not be considered.

Table 4−170. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	68−SW
TVA D−Stage Map Numbers	191
Stream Mile and Bank	• Flint Creek Mile 2.6L • TRM 308.4L
Land Use/Land Cover	Road rights–of–way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to Morgan County, Alabama for a road ROW • Permanent easement to the City of Decatur, Alabama for a sewer line
Potential Projects	None identified
Potential Partners	None identified

Parcel 171 − (420.7 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is Point Mallard Park and is located along the left descending bank of the Tennessee River at the confluence of Flint Creek. The property is encumbered by a permanent easement to the City of Decatur, Alabama, for public recreation. Point Mallard has amenities that include a campground, bathhouses, theme park, children's playground, golf course, restaurant, swimming pool, beach, tennis courts, restrooms, picnic area, and trails. Additional information pertaining to Point Mallard can be found its Web site,

http://www.pointmallardpark.com/. The Alabama state champion buttonbush also occurs on this parcel.

Undisturbed portions of this parcel have a high probability for the presence of cultural resources, and this parcel has not been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−171. Parcel Information

Location Component	Parcel Specific Information
County, State	Morgan, Alabama
TVA D−Stage Map Numbers	197 and 198
Stream Mile and Bank	TRM 308.2L

Parcel 172 − (7.8 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel consists of a string of small sand and gravel islands located between TRMs 306.8 and 308. The land cover consists of scrub-shrub and emergent wetland vegetation. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−172. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	68−SW
TVA D−Stage Map Numbers	197
Stream Mile and Bank	TRM 307.5L
Land Use/Land Cover	Sand and gravel islands with scrub-shrub and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	Systematic survey to evaluate the condition of historic properties
Potential Partners	None identified

Parcel 173 − (10.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is the Riverwalk Yacht Club and is located along the causeway for U.S. Highway 31, U.S. Highway 72, and Alabama SR 20. The parcel lies adjacent to former TVA property (Tract No. XTWR-64) that was transferred to the City of Decatur, Alabama, for public recreation purposes. Amenities include a full service marina, restaurant, bathhouses, boat ramp, and picnic area. Additional information about this parcel can be found on the Riverwalk Yacht Club's Web site, http://riverwalkyc.org/default.htm.

Undisturbed portions of this parcel have a high probability for the presence of cultural resources, and a Native American memorial is present on this parcel. There have been known Archaeological Resource and Protection Act violations on this and adjacent parcels, and any ground disturbing activities must be coordinated with TVA prior to construction. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−173. Parcel Information

Location Component	Parcel Specific Information
County, State	Limestone, Alabama
TVA D−Stage Map Numbers	189
Stream Mile and Bank	Tennessee River mile 305

Parcel 174 − (15.5 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is a string of sand and gravel islands stretching from TRM 301 to 304.6. The land cover consists of emergent, forested, and scrub-shrub wetlands. The islands and surrounding

shallow water overbank areas support mudflat and riparian/wetland fringe habitats used by a variety of water-oriented and semi-aquatic wildlife species. These species generally include migrant-wintering waterfowl, water birds, and shorebirds, as well as resident wading birds and furbearing mammals relatively tolerant of nearby disturbance from Decatur waterfront industrial development. No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−174. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone and Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	61–NE
TVA D−Stage Map Numbers	186
Stream Mile and Bank	TRM 302L
Land Use/Land Cover	Sand and gravel islands with forested, scrub-shrub, and emergent wetlands
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 175 − (16.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel includes the City of Decatur's wastewater treatment plant and road ROWs for U.S. Highway 72 and Alabama SR 20. There is a low probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4−175. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	61–NE, 61–SE, 68–NW, and 68–SW
TVA D−Stage Map Numbers	186
Stream Mile and Bank	TRM 303.1L
Land Use/Land Cover	Parking, road ROW, and wastewater treatment plant
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to Alabama–Tennessee Natural Gas Company for a pipeline • Permanent easements to the City of Decatur, Alabama for sewer lines, wastewater treatment plants, and water utilities • Permanent easement to the State of Alabama for a road right–of–way
Potential Projects	None identified
Potential Partners	• Alabama–Tennessee Natural Gas Company • City of Decatur, Alabama • State of Alabama

---

Parcel 176 − (3.5 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel consists of two noncontiguous tracts of land along both descending banks of Dry Branch. The property is encumbered by a revocable license to the City of Decatur, Alabama, for a hiking trail. The improved trails on this parcel serve as connecter segments for much larger trail systems in Decatur. This parcel has a moderate probability for the presence of cultural resources; however, it has not been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−176. Parcel Information

Location Component	Parcel Specific Information
County, State	Morgan, Alabama
TVA D−Stage Map Numbers	186
Stream Mile and Bank	Dry Creek Mile 0.5B

Parcel 177 − (17.0 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This noncontiguous parcel is located along the left descending banks of Dry Branch and Tennessee River mile 302.8. R&L Carriers, Tennessee Valley Recycling, and a portion of the old Ingalls Shipyard are located on the adjacent back-lying property. Tennessee Valley Recycling historically utilized a portion of this property; however, industrial operations on this parcel have ceased. There is a moderate probability for the presence of cultural resources in undisturbed areas, and a potential project would be a survey for historic properties. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4−177. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	61–NE, 61–SE, and 68–SW
TVA D−Stage Map Numbers	186
Stream Mile and Bank	TRM 302.8L
Land Use/Land Cover	Scrub-shrub vegetation
Current Agreements/Commitments	None identified

Parcel 178 − (4.1 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is Jay Landings Marina and RV park and is located along the right descending bank of Betty Rye Branch at the confluence with the Tennessee River. The parcel is adjacent to

former TVA property (Tract Nos. XWR-505 and XWR-550). Amenities include a full service marina, campground, bathhouse, boat ramp, courtesy dock, fishing pier, and picnic area. Additional information pertaining to Jay Landings Marina can be found its Web site, http://www.jaylandingsmarina.com/.

This parcel has a low probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−178. Parcel Information

Location Component	Parcel Specific Information
County, State	Morgan, Alabama
TVA D−Stage Map Numbers	186
Stream Mile and Bank	• Betty Rye Branch 0.3−0.8R • TRM 302.9L

Parcel 179 − (7.8 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located along Betty Rye Branch, a tributary to TRM 302.9L. This parcel is encumbered by ROWs for U.S. Highway 72 and Alabama SR 20. Requests for private water use facilities would not be considered.

Table 4−179. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	61−SE
TVA D−Stage Map Numbers	186
Stream Mile and Bank	• Betty Rye Branch 0.9B • TRM 302.9L
Land Use/Land Cover	Road ROWs
Known Dispersed Recreation Opportunities	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	• Permanent easement to the Alabama–Tennessee Natural Gas Company for a pipeline • Permanent easements to the City of Decatur for electric and water utilities • Permanent easement to the State of Alabama for a road ROW • Permanent easement to a Perrylanding, Inc. for a road ROW
Potential Projects	None identified
Potential Partners	• City of Decatur, Alabama • Alabama–Tennessee Natural Gas Company • Perrylanding, Inc

---

Parcel 180 − (14.0 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is located along both banks of Betty Rye Branch, a tributary to TRM 302.7. Tennessee Valley Recycling is the adjacent property owner to the east; and YRC, Mobil Lubricants, and Roadway are the adjacent property owners to the west. There is an existing railroad line that boarders the property to the south. There is a low probability of cultural resources. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4−180. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	61−SE
TVA D−Stage Map Numbers	186
Stream Mile and Bank	TRM 302.8L
Land Use/Land Cover	Scrub-shrub vegetation
Current Agreements/Commitments	• Permanent easement to Marks Oxygen Company for a railroad • Permanent easement to Southern Region Industrial Realty, Inc. for a railroad • Revocable license to the City of Decatur, Alabama for a sewer line

---

Parcel 181 − (5.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is Pines Park and is located along the right descending bank of Betty Rye Branch. This parcel follows the 560-foot msl contour and adjoins former TVA property (Tract No. XWR-437). It is bordered on the north by the Southern Railroad Tracks, south by 5th Street NW, and on the east by an existing subdivision. This parcel provides green space and transition buffer between residential properties and industrial properties in West Decatur. The property is encumbered by a revocable license agreement with the Decatur Utilities for sewer utilities. Facilities include a parking lot, walking track, picnic pavilions, play court, children's playground, and picnic area. This parcel has a moderate probability for the presence of cultural resources; however, it has not been surveyed for the presence of historic properties. Requests for use of TVA lands to support developed recreation purposes would be considered.

Table 4−181. Parcel Information

Location Component	Parcel Specific Information
County, State	Morgan, Alabama
TVA D−Stage Map Numbers	186
Stream Mile and Bank	Betty Rye Branch Mile 1.2R

Parcel 182 − (222.6 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel consists of multiple tracts of land stretching along the right descending bank of Tennessee River mile 297.4 to 302.8. For the most part, this parcel fronts existing industrial sites such as Mallard-Fox Creek Industrial Park, Decatur-Morgan County Port, Decatur State Docks, bp, 3M, and Solutia to name a few. Portions of this parcel have not been adequately surveyed for historic properties, and there is a moderate probability for the presence of historic properties. One known historic cemetery is present. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4−182. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	61–NE and 61–SE
TVA D−Stage Map Numbers	182, 185, and 186
Stream Mile and Bank	TRMs 297.4 – 302.8L
Land Use/Land Cover	Grassland, industrial, scrub-shrub vegetation, and wetlands
Current Agreements/Commitments	• Permanent easements to Alabama-Tennessee Natural Gas Company for a natural gas pipeline • Permanent easements to Decatur-Morgan County Port for a barge terminal and industrial site • Permanent easements to the City of Decatur, Alabama, for a railroad and road rights–of–way • Permanent easement to Minnesota Mining and Manufacturing Company for a railroad

---

Parcel 183 − (2.0 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is a series of small sand and gravel islands located between TRMs 299 and 300. The land cover consists of scattered scrub hardwoods and scrub-shrub wetlands. No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−183. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Limestone, Alabama
Topographic Map (Sheet No. and Quadrant)	61–NE
TVA D−Stage Map Numbers	181 and 185
Stream Mile and Bank	TRM 299.5B
Land Use/Land Cover	Sand and gravel islands with forested, scrub-shrub, and emergent wetlands

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Survey to evaluate condition of cultural resources
Potential Partners	None identified

Parcel 184 − (1,391.8 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel includes portions of the Mallard-Fox WMA. The property is located along the left descending bank of the Tennessee River and between the Mallard-Fox Industrial Park and Mallard Creek embayment. The parcel lies within both Lawrence and Morgan counties in Alabama. This parcel features a mixture of bottomland forest; loblolly pine plantation; forested, scrub-shrub and emergent wetlands; agricultural lands; and open water.

The parcel is encumbered by a term easement to the State of Alabama for wildlife management. Public access is available by boat to portions of this parcel; in addition, roads have been established through portions of the parcel to improve accessibility. However, access to the parcel is regulated and managed by ADCNR.

Management emphasis is on providing small and big game hunting opportunities; but some waterfowl management occurs. The area also receives substantial use for fishing in the flooded embayment. The area is also used for wildlife observation opportunities. Dispersed recreation use of this parcel is regulated and managed by ADCNR with hunting, fishing, and wildlife observation occurring.

No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, an archaeological survey has not been conducted. Requests for private water use facilities would not be considered.

Table 4−184. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence and Morgan, Alabama
Topographic Map (Sheet No. and Quadrant)	61−NE
TVA D−Stage Map Numbers	175, 177, 178, 179, 181, and 182
Stream Mile and Bank	TRM 295.8L
Land Use/Land Cover	Mixed land use types managed for wildlife
Known Dispersed Recreation Opportunities	Bank fishing, hiking, hunting, and wildlife observation
Current Agreements/Commitments	Term easement to the State of Alabama for a wildlife management area
Potential Projects	Systematic survey for historic properties
Potential Partners	None identified

Parcel 185 − (8.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is comprised of multiple disjointed pieces of property located along Mallard Creek, a tributary to TRM 293.6L. ROWs for Lawrence CR 400 (Mallard Creek Road) and Lawrence CR 442 encumber this parcel. Requests for private water use facilities would not be considered.

Table 4−185. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	61−NW
TVA D−Stage Map Numbers	175
Stream Mile and Bank	• Mallard Creek Miles 0.2–1.3B • TRM 293.6L
Land Use/Land Cover	Road ROWs
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easements to Lawrence County, Alabama for a road right–of–way • Permanent easement to the State of Alabama for a road right–of–way
Potential Projects	None identified
Potential Partners	• Lawrence County, Alabama • State of Alabama

---

Parcel 186 − (3.1 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is land located along the right descending bank of the Mallard Creek. The tract extends between TVA markers 175-110 to 175-113. This parcel lies entirely below the 560-foot msl, and the current land use is deciduous forest and maintained lawns. There is a moderate probability for the presence of cultural resources. Mallard Creek Fish Camp is located on the back-lying private property. Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4−186. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	61−NW
TVA D−Stage Map Numbers	175
Stream Mile and Bank	Mallard Creek 0.7R
Land Use/Land Cover	Deciduous forest and maintained lawns
Fronts Former TVA Tract (s)	XWR−428
Structure Profile	560-foot mean sea level
Current Agreements/Commitments	• Approved water use facilities • Term license agreement to Joe Wheeler Electric for a transmission line • Permanent easement to Lawrence County, Alabama, for a roadway

---

Parcel 187 − (209.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is the uppermost portion of the Mallard Creek embayment. The land cover consists of hardwood forest, loblolly pine stands, forested wetlands along the reservoir edge, and internal sinkholes. Historic cemeteries and homesteads are on this parcel. No federally or state-listed species or species of special status are known to occur on this parcel. One historic record of the state-listed Tuscumbia darter (*Etheostoma tucsumbia*) was recorded on this parcel in 1934. There is a high probability for the presence of cultural resources; however, a comprehensive

archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−187. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	61−NW
TVA D−Stage Map Numbers	175
Stream Mile and Bank	Mallard Creek Mile 1.9B
Land Use/Land Cover	Forested wetlands, hardwood forest, internal sinkholes and springs, and scattered loblolly pine
Known Dispersed Recreation Opportunities	Bank fishing, hunting, and wildlife observation
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 188 − (108.6 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is the Mallard Creek campground. The property is located along the left descending bank of Mallard Creek near the confluence of the Tennessee River. Lawrence CR 400 provides access to the parcel. Once managed by TVA, the parcel is now managed by Drake Enterprises, LLC via a term commercial recreation easement. Amenities include a campground, picnic area, two pavilions, and playground, swimming beach, boat ramp, courtesy pier, bathhouses and dump station.

This parcel has a high probability for the presence of cultural resources. This area has been surveyed for historic properties. Any ground disturbing development must be coordinated with TVA prior to construction. Requests for use of TVA lands and associated water−based structures to support developed recreation purposes would be considered.

Table 4−188. Parcel Information

Location Component	Parcel Specific Information
County, State	Lawrence, Alabama
TVA D−Stage Map Numbers	175
Stream Mile and Bank	• Mallard Creek Miles 0.4−1.2L • Tennessee River mile 293.6L

Parcel 189 − (3.1 acres)

Proposed RLMP Allocation: Zone 3, Sensitive Resource Management

This parcel is located along the left descending bank of Mallard Creek near the confluence of the Tennessee River. This property is surrounded by Parcel 189 (Mallard Creek Campground). Access is provided via Lawrence CR 442. A ground penetrating radar survey of the south eastern portion of Parcel 189 revealed unmarked, historic grave shafts. The TVA acquisition map indicates this is an unnamed slave cemetery. Parcel 189a has been removed from the recreation easement and commercial lease that applies to Parcel 189. Current management of the recreation area has agreed to discontinue it use for camping and to assist in preserving this as a significant cultural resource. No earth disturbing activities are allowed. Basic vegetation maintenance such as mowing is appropriate. Requests for private water use facilities would not be considered.

Table 4−189. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	61−NW
TVA D−Stage Map Numbers	175
Stream Mile and Bank	Mallard Creek Mile 0.6L
Land Use/Land Cover	Maintained field
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Maintenance of existing cemetery
Potential Partners	• Drake Enterprises, LLC • Private individuals with interest in the cemetery

---

Parcel 190 − (9.4 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is a safety harbor including the Melton Bluff navigation light located at TRM 287.4L. Safety harbors are available for barges and recreational boats during adverse weather conditions or equipment malfunction. Future development of this tract will be restricted, and requests for private water use facilities would not be considered. There is a moderate probability for the presence of cultural resources.

Table 4−190. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	170
Stream Mile and Bank	TRM 287.4L
Land Use/Land Cover	Deciduous forest and pines
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Survey for historic properties
Potential Partners	None identified

Parcel 191 − (21.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank at TRM 287. The land cover is hardwood forest and rock/cherty bluff. Access, though poor, is from Spring Creek Road, passing the tract a short distance to the south, or by water. No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−191. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	170
Stream Mile and Bank	TRM 287L
Land Use/Land Cover	Hardwood forest with rock bluff
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 192 − (56.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel includes a safety harbor and a wastewater treatment plant for West Morgan–East Lawrence Water Authority. Safety harbors are available for barges and recreational boats during adverse weather conditions or equipment malfunction. Future development of this tract will be restricted, and requests for private water use facilities would not be considered. There is a high probability for the presence of cultural resources.

Table 4−192. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	170
Stream Mile and Bank	TRM 286 to 286.8L
Land Use/Land Cover	Deciduous forest, roads, wastewater treatment plant
Known Dispersed Recreation Opportunities	bank fishing, hiking, picnicking

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	Permanent easement to West Morgan–East Lawrence Water Authority for water utilities
Potential Projects	Survey for historic properties
Potential Partners	West Morgan–East Lawrence Water Authority

Parcel 193 − (122.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel spans three noncontiguous tracts of land located along the left descending bank of the Tennessee River between TRM 285 and 286. The land cover consists of hardwood forest and rock/cherty bluff. The oak-hickory forest averages approximately 85 years and the bottomland hardwoods average approximately 55 years. Considerable small game hunting and bank fishing occurs on the parcel. The parcel was leased to Lawrence County, Alabama for a county park from November 1955 to October 1974 when the lease was allowed to expire by the county.

No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−193. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	60−SW
TVA D−Stage Map Numbers	170
Stream Mile and Bank	TRM 287L
Land Use/Land Cover	Hardwood forest with rock bluff
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 194 − (9.0 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is comprised of multiple disjointed pieces of property located along Spring Creek and Goldfield Branch, tributaries to TRM 283L and 285L, respectively. This parcel is encumbered by a ROW for Lawrence County Road 48. Requests for private water use facilities would not be considered.

Table 4−194. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	54−NE and 61−NW
TVA D−Stage Map Numbers	166 and 171
Stream Mile and Bank	TRM 283L and 285L
Land Use/Land Cover	Road ROWs
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	• Permanent easements to Lawrence County, Alabama for a road right–of–way • Permanent easement to the State of Alabama for a road right–of–way
Potential Projects	None identified
Potential Partners	• Lawrence County, Alabama • State of Alabama

Parcel 195 − (4.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located on the left descending bank of Goldfield Branch and access is provided by Spring Creek Road. TVA developed and operates this area for public boat access. Amenities include a boat ramp, fishing pier and parking lot. Undisturbed portions of this parcel have a moderate probability for the presence of cultural resources; however, it has not been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−195. Parcel Information

Location Component	Parcel Specific Information
County, State	Lawrence, Alabama
TVA D−Stage Map Numbers	171
Stream Mile and Bank	TRM 285L

Parcel 196 − (0.7 acre)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of Goldfield Branch between TVA markers 171-85WC and 171-80WC. This parcel lies below the 560-foot msl contour, and the current land use is deciduous forest. Water use facilities have not been constructed along the shoreline, but future requests for private water use facilities would be considered.

Table 4−196. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	61−NW
TVA D−Stage Map Numbers	171
Stream Mile and Bank	Tennessee River mile 285L
Land Use/Land Cover	Deciduous forest
Fronts Former TVA Tract (s)	XWR−509
Structure Profile	Varies
Current Agreements/Commitments	None identified

Parcel 197 − (0 acre)

Proposed RLMP Allocation: Zone 1, Non−TVA Shoreland

This parcel is located at the confluence of Goldfield Branch with the Tennessee River. The TVA property is located below the 556-foot msl contour. At one time, TVA and the adjoining private property owner were in discussions about TVA acquiring the property below the 560-foot msl contour. This additional property would have been used for navigation materials when maintaining signs, lights, buoys, etc. However, the acquisition never occurred, and TVA property remains at the 556-foot msl contour. The shoreline has a high probability for the presence of cultural resources.

Table 4−197. Parcel Information

Location Component	Parcel Specific Information
County, State	Lawrence, Alabama
TVA D−Stage Map Numbers	171
Stream Mile and Bank	TRM 285L

Parcel 198 − (34.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is a safety harbor located at TRM 284L. Safety harbors are available for barges and recreational boats during adverse weather conditions or equipment malfunction. There is a moderate probability for the presence of cultural resources. Future development of this tract will be restricted, and requests for private water use facilities would not be considered.

Table 4−198. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	54–NE
TVA D−Stage Map Numbers	165 and 166
Stream Mile and Bank	TRM 284L
Land Use/Land Cover	Deciduous forest

Location Component and Public Involvement Opportunities	Parcel Specific Information
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Survey for historic properties
Potential Partners	None identified

Parcel 199 − (121.2 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel is located along the left descending bank of the Tennessee River at the confluence of Spring Creek. The land cover is mostly mature loblolly pine forest which was planted by the Civilian Conservation Corps in the late 1930s. A bottomland hardwood stand is located on the northeastern side of the parcel, and there is a small agricultural field located near the southern end of the parcel. Numerous listed species have been found in the adjacent reservoir. However, no federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−199. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	54–NE
TVA D−Stage Map Numbers	165 and 166
Stream Mile and Bank	TRM 283.8L
Land Use/Land Cover	Predominately mature loblolly pine forest with mixed hardwoods and one small agricultural field near the southern end of the parcel
Known Dispersed Recreation Opportunities	Bank fishing, primitive camping, and wildlife observation
Current Agreements/Commitments	Term agricultural license to a private individual for perennial hay production

Location Component and Public Involvement Opportunities	Parcel Specific Information

Potential Projects	• Conversion of mature pine forest into open pine savannah for improved wildlife habitat
	  • Placement of TVA property and public lands signs along the parcel boundary and shoreline
	  • Refresh the existing paint denoting TVA's property boundaries
	• Systematic survey for historic properties

Potential Partners	Licensee

Parcel 200 − (26.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel lies along both banks of Spring Creek with access by Spring Creek Road. Its access and topography make it suitable for a variety of developed recreational facilities and activities. The parcel is currently undeveloped but is informally used by the public for boat launching, shoreline fishing, and other water based recreation activities. Potential future public recreation development could include a boat ramp, shoreline fishing area, and picnic or camping facilities, and developed trail head to support trail access for trails on adjacent parcels. This parcel has a moderate probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−200. Parcel Information

Location Component	Parcel Specific Information
County, State	Lawrence, Alabama
TVA D−Stage Map Numbers	166
Stream Mile and Bank	Spring Creek Mile 0.6B

Parcel 201 − (794.9 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This large parcel encompasses most of the Spring Creek embayment. The land cover is a patchwork of pine and hardwood stands with intervening open pastureland and pockets of shrub

and brush. Some of the loblolly and shortleaf pine plantations date from the CCC period of the late 1930s. The adjacent shallow waters of Spring Creek have large areas of submerged aquatic vegetation during some years. There are large agricultural fields located along the eastern and western shores of Spring Creek.

The shores of Swoope Pond are covered with a mix of pine, young hardwood, agricultural land, and pasture interspersed with pockets of scrub-shrub and forested and emergent wetland. A small impoundment, Cottonwood Pond, is located in the southwestern corner of the parcel. During some years, the shoreline along roughly the northern half of the tract is fronted by aquatic bed wetland, and several low islands lie a short distance offshore.

The diversity of woodland and early successional habitats in this area supports a good small game population, and there are opportunities for further wildlife benefits through cooperative efforts in the management of the agricultural land.

There is considerable informal recreational use of the area, primarily by bank fishermen. There is easy access by road and by water through the use of the adjacent state access ramp. A high amount of small game hunting takes place on the adjoining private property, and all-terrain vehicle abuse has also occurred on this parcel.

No federally or state-listed species or species of special status are known to occur on this parcel. There is a high probability for the presence of cultural resources; however, a comprehensive archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−201. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	54–NE
TVA D−Stage Map Numbers	166, 167, and 258
Stream Mile and Bank	Spring Creek Mile 2.3B
Land Use/Land Cover	Large agricultural fields, mixed hardwood and pine forest, and scrub-shrub and forested wetlands
Known Dispersed Recreation Opportunities	Bank fishing, primitive camping, and wildlife observation
Current Agreements/Commitments	Term agricultural licenses to a private individuals for row crops (corn, soybean, and wheat)

Location Component and Public Involvement Opportunities	Parcel Specific Information
Potential Projects	• Increased vegetation management for grasslands and early successional communities for wildlife benefits • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	Licensees

Parcel 202 − (6.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel is located at Spring Creek Mile 4.6B, tributary to Tennessee River mile 283L, and is encumbered by TVA's Wheeler–Guntersville 161–kV and 500– kV TL. There is a moderate probability for the presence of cultural resources. Requests for private water use facilities would not be considered.

Table 4−202. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	54–NE
TVA D−Stage Map Numbers	258
Stream Mile and Bank	TRM 283L
Land Use/Land Cover	Transmission line ROW
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	Survey for historic properties
Potential Partners	None identified

Parcel 203 − (82.8 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is located along the left descending bank of the Tennessee River at the confluence with Spring Creek. International Paper is the back-lying property owner. The intermittent use of the back-lying property serves as a recreation amenity for employees with a baseball field, tennis courts, campground, picnic area, boat ramp, and courtesy pier. The land cover of the adjoining TVA property is deciduous forest. The parcel has been allocated for industrial use to support future expansion or associated support of International Paper or other industrial needs. There is a moderate potential for the presence of cultural resources, but it has not been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4−203. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	54−NE
TVA D−Stage Map Numbers	165 and 166
Stream Mile and Bank	TRM 283L
Land Use/Land Cover	Deciduous forest
Current Agreements/Commitments	None identified

Parcel 204 − (396.3 acres)

Proposed RLMP Allocation: Zone 5, Industrial

This parcel is located along the left descending bank of the Tennessee River and stretches between TRM 279 and 282. Historically, this area has seen significant interest in potential industrial development. While approximately 3 river miles of TVA property has been allocated for industrial use, TVA intends to preserve vegetative buffers throughout the parcel to maintain the visual integrity. The size and location of the vegetative buffers will be determined during the site-specific environmental review for each potential industrial development.

In 2006, TVA conducted an intensive study of a large portion of the parcel. Approximately 75 plant species were identified with six of those plant species being classified as invasive. However, no rare plant species were observed during field inspections. During this same timeframe, no protected terrestrial animal species, caves, heron colonies, or other unique terrestrial habitats were found. Two caves exist along the shoreline, one remains inundated with water from the reservoir, and the other is partially exposed during winter when reservoir levels are lowered. Neither cave was found to be suitable habitat for cave obligate animals. An active bald eagle nest occurs approximately one mile from the parcel. Bald eagle surveys would be required during subsequent breeding seasons prior to development on the parcel. No caves used by Indiana bats exist in or near the project area. Forested habitat providing potentially suitable summer habitat for this species exists. Small emergent, scrub-shrub wetlands occur along portions of the shoreline.

Approximately 170 acres were surveyed for archaeological resources, and an architectural survey consisted of a 0.5-mile viewshed surrounding portions of the parcel. The surveys identified 10 archaeological resources and two previously recorded historic/architectural resources, and all findings were considered ineligible for the National Register of Historic Places. The remainder of the parcel would require an archaeological survey prior to any construction or issuance of TVA landrights.

An environmental review tailored to the proposed industrial develop would occur prior to any ground disturbing activities. Requests for use of TVA lands and associated water-based structures to support industrial purposes would be considered.

Table 4−204. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	53–SE and 54−NE
TVA D−Stage Map Numbers	161, 162, and 165
Stream Mile and Bank	TRM 279−282R
Land Use/Land Cover	Deciduous forest and wetlands
Current Agreements/Commitments	None identified

Parcel 205 − (16.1 acres)

Proposed RLMP Allocation: Zone 4, Natural Resource Conservation

This parcel consists of two noncontiguous tracts of land located between Freeman Acres and Wheeler Dam Cabin Sites. The property sits in a small embayment along the left descending bank of the Tennessee River at TRM 278. The adjacent property owners do not own the necessary land rights to construct private water use facilities, mow grass, cut trees, or alter the natural riparian vegetation on this parcel of public land. The parcel has no road access except across private land. Currently, there are some private encroachments located along the eastern shore of the parcel.

The eastern parcel is covered by hardwood timber with a small percentage mix of pine. In some locations few tree saplings remain to replace the older trees as they decline. It is important to the casual lake user that TVA not allow this tract to convey the impression that it is an extension of private backyards, thereby discouraging full realization of public benefit that this public resource otherwise offers.

The western parcel of the tract located adjacent to the Wheeler Dam Subdivision does not have the use pressure that currently occurs on the opposite shoreline. The 6-acre parcel is approximately 350 feet deep and has a shoreline length of approximately 1,500 feet. The subdivision road terminates at the northwestern end of the parcel and could easily provide access to TVA property. The parcel is covered with a dense stand of mixed hardwood and pine timber. The soil is highly erodible but has been stabilized by the existing vegetation. The timber cover also provides excellent habitat for forest-related wildlife.

During the formative years of reservoir development, both parcels were reserved for a navigation safety harbor. However, TVA abandoned this use in the early 1970s because of conflicts with unauthorized private water use facilities. The embayment is still used by recreational boaters seeking shelter from storms or having mechanical difficulty.

No federally or state-listed species or species of special status are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted. There are no existing shoreline alterations, and requests for private water use facilities would not be considered.

Table 4−205. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lawrence, Alabama
Topographic Map (Sheet No. and Quadrant)	53−SE
TVA D−Stage Map Numbers	161
Stream Mile and Bank	TRM 278L
Land Use/Land Cover	Mixed hardwood and pine forest with limited unauthorized vegetation management
Known Dispersed Recreation Opportunities	Bank fishing
Current Agreements/Commitments	None identified
Potential Projects	• Mitigation of unauthorized vegetation management • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	Neighboring property owners

Parcel 206 − (4.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This retained parcel includes property along the left descending bank of the Tennessee River. This parcel fronts one of the three Joe Wheeler State Park tracts of land transferred by TVA to the State of Alabama under agreement Tract No. XTWR-62. Most of the parcel follows the 560-foot msl contour. However, there is also a small interior tract which was the site of a former water tower that serviced water to the original dam reservation area. The amenities at this portion of the Joe Wheeler State Park include a boat ramp, courtesy dock, cabins, picnic areas, tennis courts, restrooms and bathhouses. There is a low probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−206. Parcel Information

Location Component	Parcel Specific Information
County, State	Lawrence, Alabama
TVA D−Stage Map Numbers	157
Stream Mile and Bank	TRM 275.5−278L

Parcel 207 − (1.8 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This retained parcel includes property along the left descending bank of the Tennessee River and downstream of Wheeler Dam. This parcel fronts one of the three Joe Wheeler State Park tracts of land transferred by TVA to the State of Alabama under agreement Tract No. XTWR-62. The parcel follows the 513-foot msl contour. The amenities at this portion of the Joe Wheeler State Park include a trail system and opportunities for bank fishing. There is a low probability for the presence of cultural resources, but this parcel has not been surveyed for historic properties. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−207. Parcel Information

Location Component	Parcel Specific Information
County, State	Lawrence, Alabama
TVA D−Stage Map Numbers	10 and 157
Stream Mile and Bank	TRM 274.1L

This page intentionally left blank

CHAPTER 5. PLANNING TEAM

J. Kenley Austin

Position:	Program Manager, Reservoir Land Use and Permitting
Education:	B.S., Biology and Geography
Experience:	12 years in Planning and Managing Land; 8 years in Natural Resource Management
Involvement:	Planning Team and Deed interpretation

Chellye L. Campbell

Position:	Senior Specialist, Land Policy
Education:	B.S., Biology
Experience:	14 years in Planning and Managing Land
Involvement:	Deed interpretation and Land Policy guidance

Jerry G. Fouse

Position:	Recreation Specialist
Education:	M.B.A.; B.S., Forestry and Wildlife
Experience:	38 years in Natural Resources – Recreation Planning and Economic Development
Involvement:	Planning Team and Recreation Management

Thomas O. Maher

Position:	Senior Archaeologist
Education	Ph.D., Anthropology
Experience:	32 years in the field of Archaeology
Involvement:	Planning Team and Cultural Resource Management

Leonard L. McCurdy, Jr.

Position:	Senior Specialist, Reservoir Land Use and Permitting
Education:	B.S., Environmental Studies–Chemistry; J.D., Law
Experience:	25 years in the field of Law including 18 years in TVA real property rights
Involvement:	Deed interpretation and Land Policy guidance

Susan D. McDaniel

Position:	Process Integration Specialist
Experience:	30 years in Geographic Information Systems and Planning and Managing Land
Involvement:	Planning Team and preparation of geographic information system

Heather L. Montgomery

Position:	Senior Program Manager, Reservoir Lands Planning
Education:	B.S., Environmental Biology
Experience:	13 years in Planning and Managing Land and Environmental Impacts Evaluation
Involvement:	Program Manager

Mark T. Morrissey

Position:	Specialist, Geographic Information Systems
Education:	B.S., Geography
Experience:	2 years in Planning and Managing Land; 5 years in Industrial Safety and Compliance
Involvement:	Planning Team and preparation of geographic information system

Karen E. Rylant

Position:	Senior Specialist, Section 26a Policy and Process
Education:	Ph.D., Agronomy (Soil Chemistry); M.S., Soil Fertility; B.A., Chemistry, B.A., Geology
Experience:	8 years in Environmental Research; 5 years in Land and Shoreline Management
Involvement:	Deed interpretation and Section 26a guidance

Damien J. Simbeck

Position:	Watershed Representative
Education:	M.S., Zoology; B.S., Professional Biology
Experience:	23 years in aquatic, land, and natural resource management
Involvement:	Planning Team and Biological Resource Management

CHAPTER 6. LITERATURE CITED

Abram, Susan M. 2013. "Cherokees in Alabama." Electronic document. Retrieved from http://www.encyclopediaofalabama.org/article/h-1087 (accessed May 2016).

Alabama Department of Conservation and Natural Resources. 2016. Alabama Wildlife and their Conservation Status. Retrieved from http://www.outdooralabama.com/watchable-wildlife (accessed August 2016).Alabama Department of Environmental Management. 2016. Alabama §303(d) List (Draft), Retrieved from http://www.adem.state.al.us/programs/water/303d.cnt (accessed August 2016).

Alabama Department of Environmental Management, 2016 Alabama §303(d) List (Draft), available at: http://www.adem.state.al.us/programs/water/303d.cnt (Accessed August 2016).

Alabama Invasive Plant Pest Council. 2012. Rescuing and Preserving Our Natural Heritage. Retrieved from https://www.se-eppc.org/alabama/ (accessed August 2016).

Altschul, JH.1980. Ethnohistory of the Middle Tennessee River. In Cultural Resource Investigations at the Redstone Arsenal, Madison County, Alabama, edited by Prentice M. Thomas Jr., pp. New World Research, Inc., Report of Investigations No. 35.

Benson, A.J., D. Raikow, J. Larson, A. Fusaro, and A.K. Bogdanoff. 2016. Dreissena polymorpha. USGS Nonindigenous Aquatic Species Database, Gainesville, Florida. Retrieved from https://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=5 (accessed October 2016).

EDDMapS. 2016. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Retrieved from http://www.eddmaps.org/ (accessed October 2016).

Federal Register. 1999. Executive Order 13112 of February 3, 1999, Invasive Species, Federal Register, February 8, 1999/Presidential Documents.

Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. 19+ vols. New York and Oxford.

Gage, MD and Herrmann NP. 2009. Archaeological Site Identification and Erosion Monitoring for the TVA Reservoir Operation Compliance Project: the 2005-2009 Field Season on Portions of Blue Ridge, Chatuge, Cherokee, Fontana, Hiwassee, Norris, Nottely, and Wheeler Reservoirs. Draft report prepared for the Tennessee Valley Authority, Cultural Resources, Knoxville, Tennessee.

Homer, C.G., Dewitz, J.A., Yang, L., Jin, S., Danielson, P., Xian, G., Coulston, J., Herold, N.D., Wickham, J.D., and Megown, K. 2015. Completion of the 2011 National Land Cover Database for the conterminous United States-Representing a decade of land cover change information. Photogrammetric Engineering and Remote Sensing, v. 81, no. 5, p. 345-354.

Hilty, John. 2015. Illinois Wildflowers. Retrieved from http://www.illinoiswildflowers.info/ (accessed July 2016).

Kappler, Charles.1904a. "Treaty with the Cherokee, 1817," in Indian Affairs: Laws and Treaties, Vol. II Treaties. Government Printing Office, Washington, D.C.1904b "Treaty with the Cherokee, 1819," in Indian Affairs: Laws and Treaties, Vol. II Treaties. Government Printing Office, Washington, D.C.

Ladybird Johnson Wildflower Center. 2013. Native Plant Information Network, NPIN. Lady Bird Johnson Wildflower Center at The University of Texas, Austin, Texas. Retrieved from http://www.wildflower.org/plants/ (accessed July 2016).

McDonough, T. A. and G. D. Hickman. 1999. "Reservoir Fish Assemblage Index Development - A Tool for Assessing Ecological Health in Tennessee Valley Authority Impoundment," in Assessing the Sustainability and Biological Integrity of Water Resources Using Fish Communities, 523-540. Edited by T. Simon. Washington, D.C.: CRC Press

Moore, Clarence B. 1915. Aboriginal Sites on the Tennessee River. Journal of the Academy of Natural Sciences of Philadelphia, second series 16(3).

NatureServe. 2016. NatureServe Web Service. Arlington, Virginia. U.S.A. Retrieved from http://services.natureserve.org (accessed July, 2016).

O'Brien, Greg. 2013 "Chickasaws in Alabama." Electronic document. Retrieved from http://www.encyclopediaofalabama.org/article/h-1487 (accessed May 2016).

Shaw, Scott, 2000. Cultural Resources in the Wheeler Reservoir. Report submitted to the Tennessee Valley Authority, Norris by the Office of Archaeological Services, University of Alabama Museums, Moundville, Alabama.

Southeast Exotic Pest Plant Council. Retrieved from http://www.se-eppc.org/weeds.cfm (accessed August 2016).

Squier, Ephraim G. and Edwin H. Davis. 1848. Ancient Monuments of the Mississippi Valley. Contributions to Knowledge No. 1. Smithsonian Institution, Washington, D.C.

Tennessee Department of Environment and Conservation. 2014. TDEC Rare Species Data viewer. Retrieved from https://tn.gov/environment/article/tdec-dataviewers (accessed July 2016).

TVA. 1999. Tennessee Valley Authority. Shoreline Management Initiative: An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley Final Environmental Impact Statement. Retrieved from https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy.

————. 2005. Tennessee Valley Authority Recreation Strategic Plan: A Framework for Providing Recreation Opportunities On and Along the Tennessee River 2004-2005.

————. 2011. Natural Resource Plan and associated Natural Resource Plan Final Environmental Impact Statement, Volumes 1 and 2. Retrieved from

https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan.

————. 2016a. Reservoir Health Ratings. Retrieved from https://www.tva.gov/Environment/Environmental-Stewardship/Water-Quality/Reservoir-Health-Ratings (accessed July 2016).

————. 2016b. Tennessee Valley Authority Natural Heritage Database, Data Received 2016.

————. 2016c. Tennessee Valley Authority Reservoir Vital Signs Monitoring Program Fish Collections, Data Received 2016.

Thomas, Cyrus.1894. Report on the Mound Explorations of the Bureau of Ethnology. In Twelfth Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution, 1890–'91, by John W. Powell, pp. 1–742. Smithsonian Institution, Washington.

USDA NRCS. 2016a. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Retrieved from http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed July 2016).

USCB. 2010a. U.S. Census Bureau Population Division. Annual Estimates of the Resident Population: April 2010-July 1, 2015, UT Center for Business and Economic Research, 2003.

————. 2010b. American Fact Finder 2010-2014 American Community Survey, 5-year estimates. Retrieved from http://factfinder.census.gov/ (accessed July 2016)

————. 2015. Annual Estimates of the Resident Population: April 1, 2010-July 1, 2015. Retrieved from http://factfinder.census.gov/ (accessed July 2016).

USDOI. 2008. U.S. Department of the Interior. Reclamation: Managing Water in the West; Resource Management Plan, Navajo Reservoir Area, Colorado and New Mexico, Final Environmental Assessment and Finding of No Significant Impact, June 2008.

U.S. Environmental Protection Agency. 2013. U.S. Environmental Protection Agency. Level III Ecoregions of the Continental United States: Corvallis, Oregon, U.S. EPA– National Health and Environmental Effects Research Laboratory, map scale 1:7,500,000. Retrieved from https://pubs.usgs.gov/tm/04/c03/virtual_CD/useco.pdf (accessed July 2016)

U.S. Fish and Wildlife Service. 2016a. IPaC Trust Resources Report. Information, Planning and Conservation System. Retrieved from https://ecos.fws.gov/ipac/ (accessed October 2016).

USFWS. 2016b. U.S. Fish and Wildlife Service. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Retrieved from http://www.fws.gov/wetlands (accessed July 2016).

USGS. 2016. U.S. Geological Survey. Land Cover Trends Project. Retrieved from http://landcovertrends.usgs.gov/main/ecoIndex.html (accessed July 2016).

Webb, William S. 1939. An Archaeological Survey of the Wheeler Basin on the Tennessee River in Northern Alabama. Smithsonian Institution Bureau of American Ethnology, Bulletin 122. United States Government Printing Office, Washington, D.C.

GLOSSARY

acre	A unit measure of land area equal to 43,560 square feet
agricultural licensing	Some parcels or portions of parcels designated for other purposes or uses may also be suitable for interim agricultural licensing. These parcels have been identified using the criteria contained in TVA's agriculture instruction. Normal tenure for a TVA agricultural license is five years. Land with extreme erosion potential may not be licensed for agricultural use unless erosion and sediment controls, including the use of best management practices, can be successfully implemented. Further investigation and/or mitigation of adverse impacts to natural or cultural resources may be required prior to approval of license agreements.
cultural resources	Archaeological, historic, and architectural resources
dam reservation	Lands generally maintained in a park–like setting by TVA to protect the integrity of the dam structure, hydroelectric facilities, and navigation locks. The reservation also provides for public visitor access to the TVA dam facilities and recreation opportunities, such as public boat access, bank fishing, camping, picnicking, etc. Hunting is not typically allowed on dam reservations.
deciduous	Vegetation that sheds leaves in autumn and produces new leaves in the spring.
dewatering unit	A small impoundment that is operated independently of the larger reservoir. Surface water is pumped from the dewatering unit to the reservoir during the summer months and vice versa during winter months.
dispersed recreation	Recreation of an informal nature such as hunting, hiking, biking, bird watching, photography, primitive camping, bank fishing, and picnicking, and etc. that occur on TVA land. These activities are not associated with developed facilities although some improvements may occur for access, health and safety, or to protect the environment.
embayment	A bay or arm of the reservoir
emergent wetland	Wetlands dominated by erect, rooted herbaceous plants, such as cattails and bulrushes.
endangered species	A species in danger of extinction throughout all or a significant part of its range. Endangered species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.
Environmental Policy	A TVA Board–approved policy that communicates guiding principles to lead TVA successfully in the reduction of its environmental impact while continuing to provide reliable and competitively priced power to the Valley
floodplain	Any land area susceptible to inundation by water from any source by a flood of selected frequency. For purposes of the National Flood Insurance Program, the floodplain, as a minimum, is that area subject to one percent or greater chance of flooding (100–year flood) in any given year.
forest	Vegetation having tree crowns overlapping, generally forming 60 to100 percent cover.
Land Policy	A TVA Board–approved policy that guides retention, disposal, and planning interests in real property
mitigation	An action that either will result in avoidance or an effect or cause the results of an activity to be minor in significance
natural areas	Ecologically significant sites, lands set aside for particular management

	objectives, and lands that contain sensitive biological, cultural or scenic resources. The TVA natural area program includes small wild areas, habitat protection areas, wildlife observation areas, and ecological study areas.
plan tract	A numbered parcel of TVA fee–owned land that has been assigned, through the reservoir land planning process, an allocation to guide future land use decisions.
prime farmland	Generally regarded as the best land for farming, these areas are flat or gently rolling and are usually susceptible to little or no soil erosion. Prime farmland produces the most food, feed, fiber, forage, and oil seed crops with the least amount of fuel, fertilizer, and labor. It combines favorable soil quality, growing season, and moisture supply and, under careful management, can be farmed continuously and at a high level of productivity without degrading either the environment or the resource base. Prime farmland does not include land already in or committed to urban development, roads, or water storage.
riparian	Related to or located on the banks of a river or stream
scrub–shrub	Woody vegetation less than about 20 feet tall. Species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions
shoreland	The surface of land lying between the minimum pool elevation of a TVA reservoir and the maximum shoreline contour or TVA back–lying property (whichever is further)
shoreline	The line where the water of a TVA reservoir meets the shore when the water level is at the normal summer pool elevation.
shoreline access rights	TVA land encumbered with deeded or implied rights held by adjacent property owners. The deeded or implied rights allow individuals to construct water use facilities upon receipt of TVA's written approval of plans.
threatened species	A species threatened with extinction throughout all or a significant portion of its range or territory. Threatened species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.
wetlands	As defined in TVA Environmental Review Procedures, "Wetlands are those areas inundated by surface or groundwater with a frequency sufficient to support and under normal circumstances do or would support a prevalence of vegetation or aquatic life that requires saturated or seasonably saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, mud flats, and natural ponds.
wildlife management area	Land and/or water areas designated by state wildlife agencies, such as the Alabama Department of Conservation and Natural Resources, for the protection and management of wildlife. These areas typically have specific hunting and trapping regulations as well as rules regarding appropriate uses of these areas by the public.

INDEX

Advisory Council on Historic Preservation 45
Alabama ii, v, 7, 8, 9, 12, 13, 18, 24, 27, 29, 30, 31, 36, 40, 44, 47, 48, 51, 52, 53, 56, 57, 68, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 240, 241, 242, 243, 247, 248, 250, 252
aquatic ecology ..... i, 19, 23
archaeological resource 46, 55, 60, 239
area of potential effect ..... v, 45
back-lying land 68, 70, 137, 140
best management practice 251
Committed land 63
Comprehensive Valleywide Land Plan ..... iii, v, 6, 59, 68, 69, 70
cultural resource 45, 46, 48, 65, 69, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 89, 90, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 133, 134, 136, 137, 138, 139, 140, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 167, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 183, 184, 185, 186, 187, 188, 189, 191, 192, 194, 195, 196, 197, 198, 199, 200, 202, 203, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 241, 242, 251
developed recreation . 6, 11, 12, 14, 30, 35, 44, 49, 50, 62, 65, 68, 69, 70, 74, 75, 80, 81, 83, 84, 85, 89, 94, 103, 110, 111, 115, 122, 130, 139, 146, 147, 151, 152, 162, 191, 195, 201, 202, 205, 207, 210, 211, 214, 215, 218, 219, 221, 227, 232, 235, 242
dissolved oxygen 22, 41, 176
ecologically significant site 48, 252
endangered species ..... i, 23, 40, 65, 150, 251, 252
environmental impact statement ..... v, 1, 248
Executive Order ..... v, 18, 52, 55, 141, 247
fish ..... ii, v, 19, 20, 22, 24, 36, 41, 54, 105, 106, 141, 149, 225, 248, 249
flood 1, 8, 9, 10, 42, 44, 46, 59, 79, 86, 97, 98, 101, 103, 116, 134, 144, 145, 157, 205, 206, 209, 211, 251
floodplain 10, 32, 44, 97, 209, 251
flowage easement 10, 59
industrial 6, 10, 11, 22, 41, 42, 44, 47, 49, 50, 59, 61, 62, 64, 65, 67, 68, 69, 70, 82, 116, 138, 144, 145, 149, 151, 154, 155, 157, 180, 189, 190, 212, 216, 218, 220, 221, 222, 223, 238, 239, 240, 246
Kentucky 7, 15, 16
land use i, iii, 3, 6, 9, 11, 42, 46, 49, 50, 57, 59, 60, 63, 64, 65, 68, 70, 71, 73, 76, 77, 78, 79, 80, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 104, 106,

107, 108, 109, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 137, 138, 139, 140, 142, 143, 145, 146, 147, 148, 149, 150, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 203, 204, 206, 208, 209, 210, 212, 213, 215, 216, 217, 219, 220, 221, 222, 223, 224, 225, 226, 228, 229, 230, 231, 232, 233, 234, 235, 237, 238, 239, 240, 241, 245, 252, 262
maximum shoreline contour 252
mitigation 168, 180, 200, 241, 251, 252
mussel 22, 26, 27, 79, 119, 155, 156, 157, 168, 173, 174, 179, 181
National Environmental Policy Act (NEPA) ..... v, 23, 52, 59, 71
National Historic Preservation Act ..... v, 45, 46
National Park Service 48, 57, 202
National Register of Historic Places ..... v, 45, 47, 48, 60, 67, 73, 74, 81, 240
natural area 48, 55, 60, 61, 62, 63, 65, 252
plant communities 19
prime farmland ... i, ii, 9, 10, 11, 77, 78, 86, 97, 106, 153, 155, 156, 157, 158, 164, 165, 166, 167, 183, 252
recreation .i, ii, 5, 10, 11, 12, 13, 14, 43, 50, 54, 55, 57, 58, 60, 61, 62, 63, 65, 68, 69, 73, 74, 76, 77, 78, 79, 81, 83, 85, 86, 88, 89, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 104, 106, 107, 108, 109, 111, 112, 113, 115, 117, 118, 120, 121, 122, 123,124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 137, 138, 139, 140, 141, 142, 143, 146, 148, 149, 150, 152, 153, 154, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 189, 191, 192, 193, 194, 195, 197, 198, 199, 200, 201, 203, 204, 205, 206, 207, 208, 209, 210, 212, 213, 214, 215, 216, 217, 220, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 234, 235, 237, 238, 241, 245, 248, 251
Reservoir Land Management Plan .... 1, iii, v, 1, 5, 6, 9, 11, 12, 13, 14, 18, 23, 36, 40, 42, 43, 44, 45, 48, 49, 53, 59, 63, 65, 66, 67, 68, 69, 70, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 242
residential development 49, 79, 87, 118, 125
residential water use facilities 63
Section 106 of the National Historic Preservation Act 45
Section 26a of the TVA Act 10, 41, 59
sensitive resource 6, 11, 14, 30, 36, 50, 58, 60, 61, 63, 64, 65, 67, 68, 69, 71, 76, 78, 79, 90, 93, 95, 97, 99, 109, 117, 121, 124, 131, 134, 150, 157, 160, 166, 167, 168, 170, 171, 173, 174, 176, 177, 178, 179, 181, 182, 183, 184, 188, 192, 196, 202, 205, 208, 214, 216, 227
shoreline access 6, 11, 35, 50, 59, 63, 65, 68, 70, 80, 82, 84, 86, 89, 112, 114, 118, 120, 123, 125, 129, 188, 225, 233, 252
Shoreline Management Initiative ..... v, 3, 10, 43, 59, 248
Shoreline Management Policy ..... i, v, 3, 63, 70
socioeconomics ..... i, 51

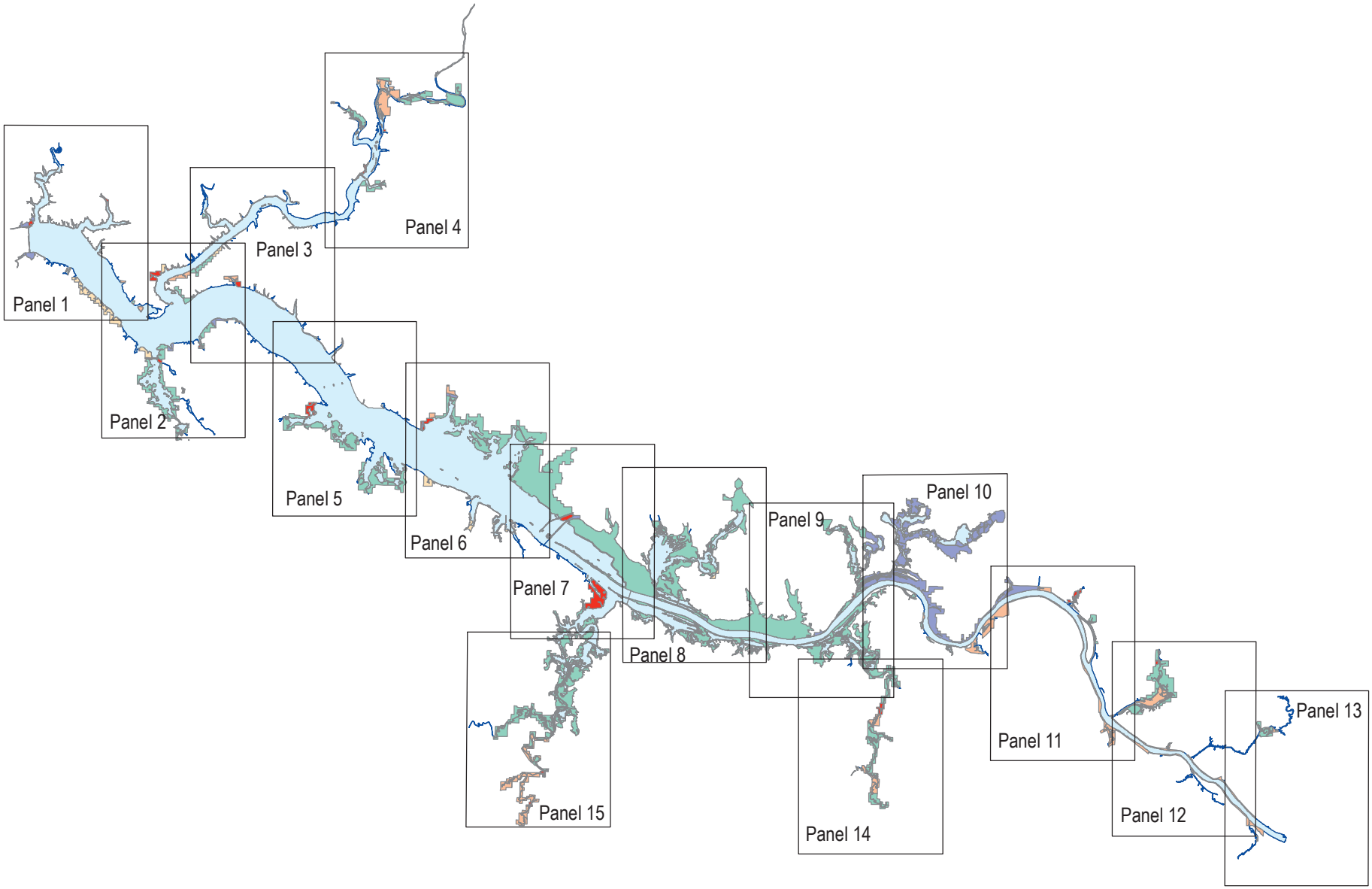
speciesii, 15, 16, 17, 18, 19, 20, 22, 23, 29, 30, 31, 32, 33, 35, 36, 39, 42, 54, 55, 60, 61, 67, 69, 77, 78, 79, 80, 82, 86, 92, 93, 95, 96, 98, 99, 100, 101, 103, 104, 105, 107, 108, 109, 111, 113, 114, 116, 117, 118, 119, 121, 122, 124, 126, 127, 128, 131, 133, 134, 136, 141, 143, 149, 150, 153, 156, 157, 158, 159, 160, 161, 163, 164, 165, 166, 167, 168, 169, 170, 171, 173, 174, 175, 176, 177, 178, 179, 181, 183, 184, 185, 187, 188, 189, 190, 191, 192, 194, 196, 197, 198, 199, 200, 203, 205, 206, 208, 209, 210, 211, 214, 216, 222, 224, 226, 229, 231, 235, 237, 239, 241, 247, 248, 251, 252
State Historic Preservation Officer 46
Tennessee .. 1, i, v, 1, 2, 7, 8, 9, 10, 11, 12, 23, 27, 29, 32, 33, 34, 35, 38, 39, 40, 44, 46, 47, 56, 57, 73, 74, 75, 76, 77, 78, 79, 80, 85, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 133, 134, 135, 136, 137, 138, 139, 141, 142, 146, 147, 152, 153, 155, 156, 157, 162, 165, 166, 167, 171, 173, 176, 177, 178, 179, 181, 182, 183, 184, 187, 188, 201, 204, 214, 216, 217, 218, 219, 220, 222, 223, 227, 230, 233, 234, 237, 238, 239, 240, 242, 247, 248, 249, 250
Tennessee Valley Authority .... 1, i, ii, iii, v, 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 30, 31, 32, 33, 34, 35, 36, 37, 38, 40, 41, 42, 43, 44, 45, 47, 48, 49, 50, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 245, 247, 248, 249, 251, 252, 262
terrestrial ecology ..... i, 14, 18
threatened ..... i, 23, 29, 30, 32, 40, 55, 60, 65, 136, 252
threatened species 23, 55, 252
TVA Land Policy 70, 71
U.S. Army Corps of Engineers ..... v, 8, 74
U.S. Environmental Protection Agency 14, 249
U.S. Fish and Wildlife Service.. v, 15, 16, 17, 43, 48, 54, 55, 56, 60, 67, 141, 142, 143, 144, 146, 149, 199, 249
uncommitted land 64
visual resource ..... i, 5, 48, 49
wetland...i, ii, 15, 17, 33, 42, 43, 44, 54, 60, 65, 67, 76, 78, 81, 82, 86, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 103, 104, 105, 106, 107, 108, 109, 111, 112, 116, 117, 118, 119, 120, 122, 123, 128, 129, 131, 132, 133, 136, 137, 142, 149, 150, 153, 158, 159, 160, 161, 163, 165, 167, 168, 169, 183, 184, 185, 187, 194, 196, 197, 198, 203, 205, 206, 211, 214, 215, 216, 222, 223, 226, 236, 237, 239, 240, 249, 251, 252
Wheeler... i, ii, iii, v, 1, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 23, 30, 31, 32, 33, 35, 36, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 64, 65, 66, 67, 68, 69, 70, 73, 74, 75, 105, 115, 134, 144, 145, 149, 150, 155, 174, 190, 195, 225, 237, 240, 241, 242, 247, 248, 250, 262, 266, 268
wildlife .....i, ii, v, 14, 17, 19, 23, 32, 33, 41, 42, 43, 49, 54, 55, 56, 60, 61, 64, 67, 78, 82, 94, 99, 108, 109, 116, 132, 133, 134, 136, 137, 139, 140, 141, 142, 143, 149, 150, 157, 158, 183, 184, 188, 190, 194, 196, 197, 198, 205, 209, 211, 216, 223, 224, 226, 235, 236, 237, 241, 245, 247, 249, 252
Wilson 8, 9, 43

This page intentionally left blank

Appendix A – Draft Land Management Plan Maps – Panels 1 through 15

This page intentionally left blank

Wheeler Reservoir



Click Panel to View PDF Map

This page intentionally left blank

Appendix B – Comparison of Parcel Allocations by Alternative

This page intentionally left blank

APPENDIX B

Comparison of Parcel Allocations by Alternative

WHEELER RESERVOIR

Of the 36,045.2 acres on Wheeler Reservoir, there are no proposed allocation changes to 28,940.0 acres (80.3 percent); all proposed allocation changes involve 7,105.2 acres (19.7 percent). Of the 7,105.2 acres, TVA would allocate 2,009.7 acres (28.3 percent) to reflect existing land use agreements or commitments. The remaining 5,095.5 acres (71.7 percent) involve proposed parcel allocations that are not based on existing land use agreements or commitments.

[1]Some parcels are separated into smaller portions to show comprehensive consideration of some parcels. Portions of parcels are in bold text with a footnote.

See Tables below:
Table 1 = No Proposed Allocation Changes;
Table 2 = Changes Based on Existing Agreements or Commitments;
Table 3 = Changes NOT based on Existing Agreements or Commitments

Table 1. No Proposed Allocation Changes			
Number of Parcels Per Zone Allocation			
Zone 2	9	Zone 5	8
Zone 3	29	Zone 6	25
Zone 4	36	Zone 7	12

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
1	2	2	128.6
3	6	6	174.8
4	2	2	8.9
7	3	3	21.5
8	3	3	4.4
9	6	6	1.2
10	7	7	9.2
12	5	5	38.7
13	7	7	11.1
14	6	6	5.3

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
15	7	7	10.5
16	6	6	20.8
19	7	7	1.8
20	4	4	23.1
22	6	6	3.9
23	7	7	29.5
24	3	3	30.5
26	4	4	8.4
29	6	6	26.8
30	3	3	15.1
31	3	3	16.4
32	4	4	42.5
34	4	4	114.0
37	4	4	30.5
40	6	6	6.5
42	4	4	84.0
43	4	4	206.5
44	4	4	70.8
46	4	4	117.2
47	3	3	317.2
49	6	6	3.7
51	7	7	13.3
52	4	4	5.7
53	7	7	7.5
54	4	4	0.8
55	6	6	5.9
59	7	7	18.4
60	4	4	100.8
63	6	6	32.6
64	4	4	2.9
65	7	7	8.7
66	4	4	9.1
68	7	7	14.3
72	4	4	6.3
73	7	7	10.3
74	6	6	60.2
76	3	3	35.3
77	4	4	332.1
81	4	4	4,145.4
82	2	2	0.0

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
86	2	2	2.3
87	2	2	81.3
88	4	4	13,313.3
90	4	4	39.3
91	5	5	17.2
92	5	5	17.6
97	2	2	4,066.9
98	3	3	70.3
99	6	6	74.1
101[1]	6	6	10.9
102	4	4	55.7
104	5	5	0.3
105	4	4	6.9
107	3	3	6.6
108	4	4	3.7
109	4	4	279.3
111	4	4	7.5
112	6	6	14.9
115	4	4	434.0
116	4	4	174.3
117	3	3	20.3
119	3	3	51.7
120	3	3	20.0
121	4	4	148.8
123	3	3	49.9
125	3	3	49.2
126	3	3	62.2
129	3	3	103.1
130	3	3	291.6
131	3	3	59.9
132	3	3	73.3
134	3	3	6.3
135	2	2	1.2
136	3	3	62.7
137	3	3	342.6
138	3	3	122.8
145	6	6	59.9
146	3	3	91.6
148	4	4	425.8
150	6	6	4.5

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
151	3	3	165.7
152	4	4	182.2
154[1]	4	4	0.6
155	4	4	14.9
158	3	3	132.8
159	4	4	39.5
162	6	6	9.4
164	4	4	39.7
165	3	3	27.2
166	4	4	119.4
169	5	5	3.6
170	2	2	2.7
171	6	6	420.7
172	3	3	7.8
173	6	6	10.0
174	3	3	15.5
175	2	2	16.7
176	6	6	3.5
177	5	5	17.0
178	6	6	4.1
181	6	6	5.2
182	5	5	222.5
188	6	6	108.6
193	4	4	122.9
195	6	6	4.9
196	7	7	0.7
200	6	6	26.8
203	5	5	82.8
205	4	4	16.1
169	5	5	3.6
170	2	2	2.7
171	6	6	420.7
172	3	3	7.8
173	6	6	10.0
174	3	3	15.5
175	2	2	16.7
176	6	6	3.5
177	5	5	17.0
178	6	6	4.1
181	6	6	5.2

Parcel	No Action Allocation (Alterative A)	Proposed Allocation (Alternative B)	Acres per Allocation
182	5	5	222.5
188	6	6	108.6
193	4	4	122.9
195	6	6	4.9
196	7	7	0.7
200	6	6	26.8
203	5	5	82.8
205	4	4	16.1
Total = 119 Parcels or Portions of a Parcel		Total = 28,940.0 Acres	

[1]Denotes a portion of the parcel

Table 2. Changes Based on Existing Agreements or Commitments			
	No Action[1] Parcels	Proposed Allocation Parcels	
Zone 2	4	36	5.5 Percent of Wheeler Lands
Zone 3	10	0	
Zone 4	28	2	
Zone 5	1	3	52 Parcels 2,009.7 Acres
Zone 6	9	8	
Zone 7	0	3	

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
2	2	6	22.7
6	6	4	8.3
17	6	2	1.1
21	4	2	1.6
25	4	2	3.7
27	4	2	11.7
36	3	2	2.7
39	4	2	4.4
61	4	7	4.8
75	6	2	20.0
78	4	2	35.1
80	4	2	1.2
82	4	2	22.9
83	4	2	19.7
84	2	5	31.7
86	4	2	66.8
87	4	2	0.3
89	4	2	5.2
93	4	2	107.9
94	4	6	6.4
95	4	6	1.7
96	5	2	4.3
101[1]	4	6	0.8
103[1]	4	2	1.8
103[1]	6	2	0.7
113	6	2	2.3
118	3	2	3.6
124	3	2	5.9
128	3	2	1.1
133	3	5	4.0

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
140	4	2	3.8
141a	3	7	0.5
147	4	2	4.5
149	4	2	4.5
156[1]	3	2	7.0
156[1]	4	2	18.6
157	4	6	4.7
160[1]	4	2	9.5
160[1]	6	2	1.4
167	4	6	4.7
179	6	2	7.8
180	4	5	14.0
184	3	4	1,391.8
185	4	2	8.4
186	4	7	3.1
190	3	2	9.4
192	4	2	56.2
194	6	2	9.1
198	6	2	34.7
202	3	2	6.2
206	2	6	4.0
207	2	6	1.8
Total = 52 Parcels or Portions of a Parcel		Total = 2,009.7 Acres	

[1]Denotes a portion of the parcel

Table 3. Changes NOT Based on Existing Agreements or Commitments			
	No Action Parcels	Proposed Allocation Parcels	
Zone 2	1	0	*14.1 Percent of Wheeler Lands*
Zone 3	23	13	
Zone 4	14	23	
Zone 5	1	4	45 Parcels 5,095.5 Acres
Zone 6	6	5	
Zone 7	0	0	

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
5	4	3	11.2
11	5	6	91.3
18	3	4	0.9
28	4	3	10.0
33	4	3	7.6
35	4	3	195.4
38	3	4	4.5
41	3	4	7.3
45	3	4	52.2
48	4	6	5.3
50	3	4	137.6
56	6	5	44.6
57	6	4	136.2
58	6	3	100.7
62	4	3	68.3
67	4	3	7.6
69	3	4	8.8
70	3	4	8.7
71	3	4	9.0
79	4	3	56.9
85	2	6	58.6
100	6	5	4.2
106	3	4	42.4
110	4	3	275.3
114	3	4	40.7
122	4	3	16.8
127	3	4	3.2
139	3	4	3.3
141	3	4	46.7
142	4	3	15.0

Parcel	No Action Allocation (Alternative A)	Proposed Allocation (Alternative B)	Acres per Allocation
143	3	5	1.1
144	3	4	724.3
153	3	4	6.3
154[1]	3	4	2.2
161	4	3	614.9
162	4	6	3.4
163	4	6	7.9
168	3	4	717.2
183	3	4	2.0
187	3	4	209.2
189	6	3	3.1
191	3	4	21.2
199	6	4	121.2
201	3	4	794.9
204	3	5	396.3
Total – 45 Parcels or Portions of a Parcel		**Total = 5,095.5 Acres**	

[1]Denotes a portion of the parcel

This page intentionally left blank

TENNESSEE VALLEY AUTHORITY

Multiple Reservoir Land Management Plans

DRAFT ENVIRONMENTAL IMPACT STATEMENT

Volume IX
Wilson Reservoir

December 2016

TVA

This page left blank intentionally

Document Type: EIS Administrative Record
Index Field: Draft EIS
Project Name: Multiple RLMPs & CVLP EIS
Project Number: 2016-2

WILSON RESERVOIR

Draft Reservoir Land Management Plan

VOLUME IX

MULTIPLE RESERVOIR LAND MANAGEMENT PLANS
DRAFT ENVIRONMENTAL IMPACT STATEMENT

Prepared by
Tennessee Valley Authority

December 2016

This page intentionally left blank

Table of Contents

APPENDICES ..... **IX-II**
LIST OF TABLES ..... **IX-II**
LIST OF FIGURES ..... **IX-III**
ACRONYMS AND ABBREVIATIONS ..... **IX-V**
CHAPTER 1. INTRODUCTION **IX-1**
1.1 Tennessee Valley Authority History IX-1
1.2 Overview of TVA's Mission and Environmental Policy IX-2
1.2.1 TVA's Mission IX-2
1.2.2 Environmental Policy IX-2
1.2.3 Land Policy IX-2
1.2.4 Shoreline Management Policy IX-3
1.3 The Natural Resource Plan IX-5
1.4 Purpose of Reservoir Land Planning IX-5
CHAPTER 2. REGIONAL OVERVIEW **IX-7**
2.1 Muscle Shoals and Wilson Dam Reservation IX-8
2.2 Wilson Reservoir and Present Shoreline IX-9
2.2.1 Land Use and Prime Farmland IX-11
2.2.2 Recreation IX-12
2.2.3 Terrestrial Ecology IX-14
2.2.4 Aquatic Ecology IX-19
2.2.5 Threatened and Endangered Species IX-22
2.2.6 Water Quality IX-36
2.2.7 Wetlands IX-38
2.2.8 Floodplains IX-39
2.2.9 Air Quality IX-40
2.2.10 Cultural and Historic Resources IX-40
2.2.11 Natural Areas and Ecologically Significant Sites IX-43
2.2.12 Aesthetics and Visual Resources IX-43
2.2.13 Noise IX-44
2.2.14 Socioeconomics and Environmental Justice IX-45
2.3 Major Features of Muscle Shoals and Wilson Dam Reservation and Wilson Reservoir IX-47
2.3.1 Muscle Shoals National Recreational Trail IX-47
2.3.2 Tennessee River/Wilson Dam Nonessential Experimental Population IX-49
2.3.3 Wilson Dam Tailwater Restricted Mussel Harvest Area IX-49
2.3.4 Trail of Tears National Historic Trail IX-50

2.3.5 Old First Quarters Small Wild Area and Potential National Natural Landmark. IX-50
2.3.6 Muscle Shoals National Heritage Area IX-50
2.3.7 Wildlife Habitat Council Certification IX-50
2.4 The Future Management of Reservoir Lands IX-51
CHAPTER 3. LAND PLANNING PROCESS IX-53
3.1 Process for Planning Land IX-53
3.2 Wilson Reservoir Goals and Objectives IX-58
3.3 Parcel Allocations IX-59
3.4 Property Administration IX-63
CHAPTER 4. PARCEL DESCRIPTIONS IX-65
CHAPTER 5. PLANNING TEAM IX-77
CHAPTER 6. LITERATURE CITED IX-79
GLOSSARY IX-83
INDEX IX-85

APPENDICES

Appendix A – Land Management Plan Maps – Panels 1 through 4 ..... IX-87
Appendix B Comparison of Parcel Allocations by Alternative IX-91

LIST OF TABLES

Table 2-1. Prime Farmland and Farmland of Statewide Importance on Wilson Reservoir IX-12
Table 2-2. Developed Public Recreation Areas on TVA Lands on the Wilson Reservoir IX-14
Table 2-3. Developed Commercial, Private and Semi-Private (camps) Recreation Areas on TVA Lands on the Wilson Reservoir IX-14
Table 2-4. Land Cover on TVA Owned Parcels and within the Vicinity of Wilson Reservoir IX-15
Table 2-5. Invasive Non-native Species that Pose a Severe Threat Known to Occur in Alabama. IX-18
Table 2-6. RFAI and Benthic Community Scores for Wilson Reservoir (2010-2014) IX-20
Table 2-7. Fish Species in Wilson Reservoir IX-20
Table 2-8. Federally and State-Listed Species in the Wilson Reservoir Counties IX-23
Table 2-9. Habitat Requirements for Plant Species of Conservation Concern within 5 Miles of Wilson Reservoir IX-27
Table 2-10. Habitat Requirements for Terrestrial Species of Conservation Concern within 3 Miles of Wilson Reservoir IX-28
Table 2-11. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Wilson Reservoir IX-31
Table 2-12. Ecological Health Indicators at Wilson Reservoir – 2012 ..... IX-37
Table 2-13. Direct Reservoir Average Daily Water Supply Withdrawals and Wastewater Discharges – 2016 ..... IX-37
Table 2-14. Wetland Types within the Wilson Reservoir IX-39

Table 2-15. Population and Percent Growth – Wilson Reservoir IX-45
Table 2-16. Employment and Income, 2010-2014 – Wilson Reservoir IX-46
Table 2-17. Minority Population and Poverty, 2010-2014 – Wilson Reservoir IX-47
Table 3-1. Land Use Zone Definitions IX-53
Table 3-2. Summary of Proposed Land Use Allocations for Wilson Reservoir Land Management Plan (Alternative B) IX-59
Table 3-3. Draft Wilson Reservoir Land Management Plan (Alternative B) and 2011 Comprehensive Valleywide Land Plan Comparison IX-62

LIST OF FIGURES

Figure 1-1. TVA Managed Reservoir Land IX-4
Figure 2-1. Muscle Shoals National Recreation Trail Complex IX-48
Figure 3-1. Percent of Wilson Reservoir Acreage Proposed by Zone (Alternative B) IX-61

This page intentionally left blank

ACRONYMS AND ABBREVIATIONS

ADEM	Alabama Department of Environmental Management
APE	Area of Potential Effect
CCC	Civilian Conservation Corps
CVLP	Comprehensive Valleywide Land Plan
dBA	A-Weighted Decibel
EIS	Environmental Impact Statement
msl	Mean Sea Level
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFDC	National Fertilizer Development Center
NFERC	National Fertilizer and Environmental Research Center
NHA	Natural Heritage Area
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NRI	Nationwide Rivers Inventory
NRP	Natural Resource Plan
PDW	Phosphate Development Works
PNNL	Potential National Natural Landmark
Reservation	Wilson Dam and Muscle Shoals Reservations
RLMP	Reservoir Land Management Plan
RFAI	Reservoir Fish Assemblage Index
RVSMP	Reservoir Vital Signs Monitoring Program
SMI	Shoreline Management Initiative
SMP	Shoreline Management Policy
SWA	Small Wild Area
TRM	Tennessee River Mile
TVA	Tennessee Valley Authority
U.S.	United States
USCB	U.S. Census Bureau
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDOI	U.S. Department of the Interior
USGS	U.S. Geologic Survey
USNPS	U.S. National Park Service
Valley	Tennessee River Valley Region
WHC	Wildlife Habitat Council

This page intentionally left blank

CHAPTER 1. INTRODUCTION

The draft Wilson Reservoir Land Management Plan (RLMP) is a study of the Tennessee Valley Authority (TVA)-managed public land surrounding Wilson Reservoir. It is one of eight draft RLMPs considered under Alternative B of this Environmental Impact Statement (EIS). The EIS Volume I contains information on the scoping process, allocation process, alternatives, comparison of the alternatives, and analysis of impacts. In addition, the EIS contains a summary, an index and appendices.

Volume IX of the EIS addresses TVA's draft RLMP for Wilson Reservoir. This Volume provides background information about TVA land management throughout its history and specifically TVA management of public land surrounding Wilson Reservoir. It explains the purpose of the draft RLMP and describes the process used in its development. The draft RLMP includes the planning process, which lists the objectives around which the RLMP was developed and a summary of the allocation process. The Wilson Reservoir Regional Overview (Chapter 2) describes the natural and social development of the reservoir and the surrounding area. The Parcel Descriptions (Chapter 4) include total acreage and parcel descriptions documenting proposed land management allocations. The allocation map is included as Appendix A of this draft RLMP.

Once TVA completes its Multiple RLMP EIS, this Volume will serve as the consolidated planning document addressing management of TVA reservoir lands on Wilson Reservoir and will be available to TVA staff and the public.

1.1 Tennessee Valley Authority History

President Franklin Roosevelt needed creative solutions to lift the nation out of the depths of the Great Depression, and the TVA is considered one of his most innovative initiatives. Roosevelt envisioned TVA as an agency different from any other. He asked Congress to create "a corporation clothed with the power of government but possessed of the flexibility and initiative of a private enterprise." On May 18, 1933, Congress passed the Tennessee Valley Authority Act (TVA Act). A link to the TVA Act is available at https://www.tva.com/About-TVA/Our-History.

From the start, TVA established a unique problem-solving approach to fulfilling its mission: Integrated Resource Management. Each issue TVA faced—whether it was power production, navigation, flood control, malaria prevention, reforestation, or erosion control—was studied in its

broadest context. TVA weighed each issue relative to the others. From this beginning, TVA has held fast to its strategy of integrated solutions, even as the issues changed over the years. A short TVA history is available at http://www.tva.com/abouttva/history.htm.

1.2 Overview of TVA's Mission and Environmental Policy

1.2.1 TVA's Mission

TVA has a rich history of improving quality of life and economic prosperity for people and businesses in the TVA service area. TVA was created by Congress in 1933 and charged with a unique mission—to improve the quality of life in the Valley through the integrated management of the region's resources. For more than eight decades, we have worked tirelessly to carry out that mission, and we are working just as hard to make life better for the nine million people who live in the Valley today. We serve the people of the Tennessee Valley by focusing on three key areas: energy, environment, and economic development.

1.2.2 Environmental Policy

As stated in TVA's 2007 Strategic Plan, "TVA will be proactive in addressing environmental concerns, including those related to global climate change." About half of the identified strategic objectives and critical success factors in the plan relate directly to TVA's environmental activities and policy-making.

Following the release of the 2007 Strategic Plan, the TVA Board asked for the development of an integrated environmental policy to outline objectives and critical success factors across the multiple areas of TVA's activities. In 2008, the TVA Board approved the Environmental Policy, which provides guiding principles for reducing the environmental impacts of TVA operations while continuing to provide reliable and affordable power to the Valley. In 2010, a biennial review of the Environmental Policy was completed, which did not result in major changes or revisions. TVA's overarching Environmental Policy objective is to provide cleaner, reliable, and affordable energy; support sustainable economic growth in the Valley; and engage in proactive environmental stewardship in a balanced and ecologically sound manner. A copy of the Environmental Policy is available at http://www.tva.com/environment/policy.htm.

1.2.3 Land Policy

On behalf of the United States, TVA originally acquired approximately 1.3 million acres of land in the Valley. Creation of the TVA reservoir system inundated approximately 470,000 acres with water. TVA has transferred or sold approximately 508,000 acres, the majority of which was

transferred to other federal and state agencies for public uses. TVA currently controls approximately 293,000 acres of reservoir lands, which continue to be managed pursuant to the TVA Act (Figure 1-1). As part of its management of these lands, TVA allocates them to various land use zones (see Section 3.1). These TVA−managed lands are frequently referred to as "TVA lands" in this document.

In 2006, TVA adopted a Land Policy to guide retention, disposal, and planning of real property. Accordingly, it is TVA's policy to manage its lands to protect the integrated operation of the TVA reservoir and power systems, to provide for appropriate public use and enjoyment of the reservoir system, and to provide for continuing economic growth in the Valley. Recognizing that historical land transfers have contributed substantially to meeting multipurpose objectives, TVA maintains the policy of retaining in public ownership the reservoir lands under its control except in those rare instances where the benefits to the public will be so significant that transferring lands to private ownership or another public entity is justified. The Land Policy is available at https://www.tva.gov/Environment/Environmental-Stewardship/Land-Management/TVA-Land-Policy.

1.2.4 Shoreline Management Policy

In November 1998, TVA completed a Shoreline Management Initiative (SMI) EIS (TVA 1999) analyzing possible alternatives for managing residential shoreline development throughout the Valley. In April 1999, TVA adopted the agency's current Shoreline Management Policy (SMP), which incorporates a strategy of managing public shoreline through an integrated approach that conserves, protects, and enhances shoreline resources and public use opportunities while providing for reasonable and compatible use of the shoreline by adjacent residents. The SMP defines the standards for vegetation management, docks, shoreline stabilization, and other residential shoreline alterations. The SMI EIS is available at https://www.tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy.

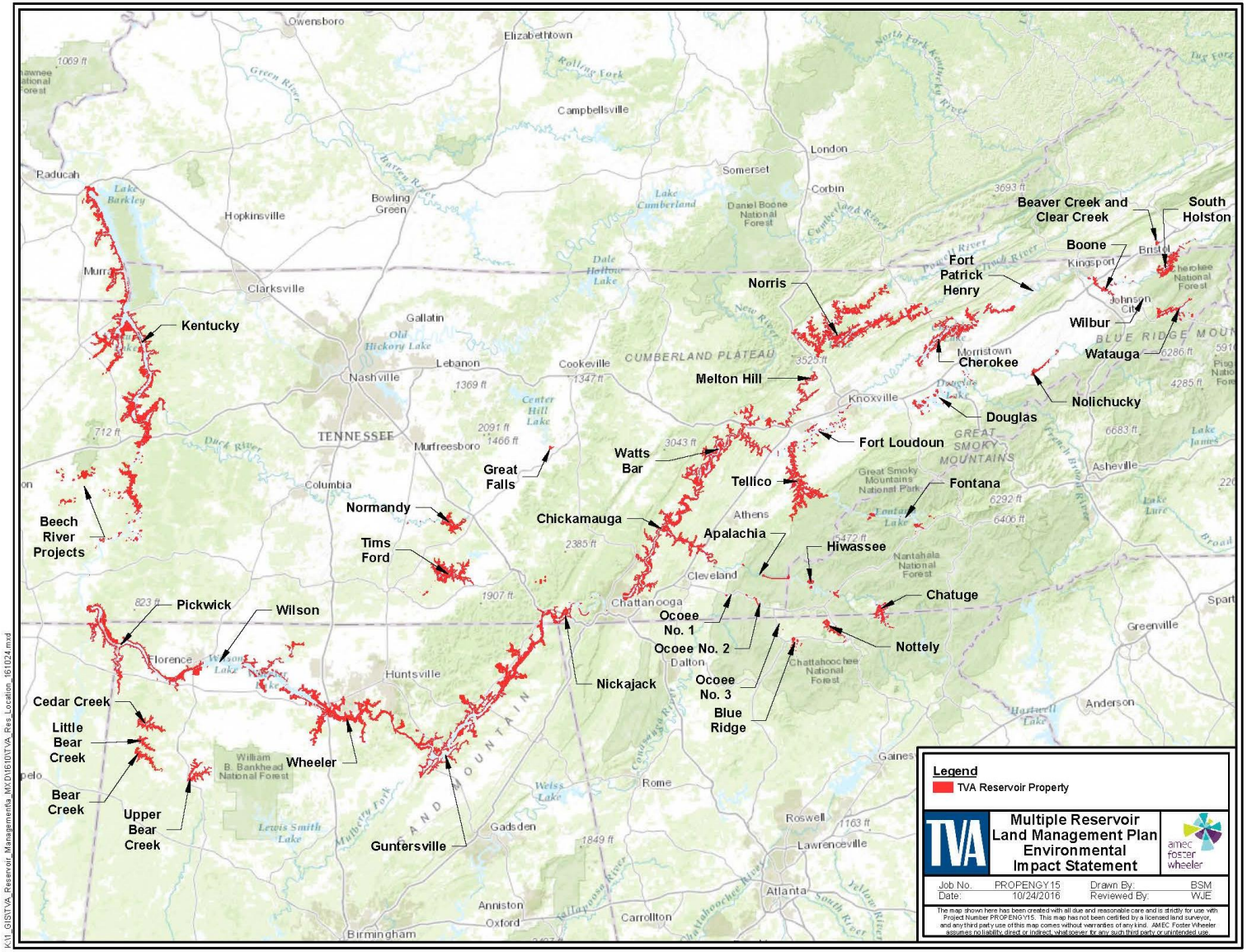


Figure 1-1. TVA Managed Reservoir Land

1.3 The Natural Resource Plan

In 2011, TVA completed a Natural Resource Plan (NRP) (TVA 2011a) that strategically guides the management of both renewable and nonrenewable resources, underscoring the importance of protecting those resources that will be lost forever if they are not actively protected or improved today. TVA is one piece of the solution and recognizes the need for a coordinated and collaborative effort to meet the near- and long-term resource needs. As such, the NRP is designed to:

- Integrate the objectives of six resource areas (biological, cultural, recreation, water, public engagement, and reservoir lands planning).
- Provide optimum public use benefit.
- Balance competing and sometimes conflicting resource uses.

These competing interests, coupled with today's environmental awareness and focus on preserving nonrenewable resources, underscore the necessity for a consistent approach to the management of TVA lands. The NRP represents TVA's high−level strategy for managing its natural resources in the near and long term. Detailed implementation plans, such as this draft RLMP, are being developed based on the NRP to drive specific implementation efforts. The NRP is available at https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan.

1.4 Purpose of Reservoir Land Planning

As a regional development agency and the nation's largest public power provider, TVA is committed to protecting and sustaining the environmental resources of the Valley for future generations through leadership in clean energy innovation and environmental management. In managing its public lands and resources, TVA seeks to provide efficient resource stewardship that is responsive to stakeholder interests.

TVA intends to manage its public land for an optimum level of multiple uses and benefits that protect and enhance natural, cultural, recreational, and visual resources in a cost−effective manner. Through this approach, TVA ensures that resource stewardship issues and stakeholder interests are considered while optimizing benefits and minimizing conflicts.

As part of the NRP, TVA developed a Comprehensive Valleywide Land Plan (CVLP). The CVLP guides resource management and administration decisions on the approximately 293,000 acres of TVA lands around 46 reservoirs. It identifies the most suitable uses for the land under TVA's control, identifying areas for project operations, sensitive resource management, natural resource conservation, industrial/commercial development, developed recreation, and shoreline access. The objectives of the CVLP are designed to implement TVA's mission of serving the Valley through energy, environment, and economic development. Under the CVLP, TVA will develop and update RLMPs, such as this proposed plan, for a portion of a reservoir, an entire reservoir, or a group of reservoirs. RLMPs are consistent with TVA's policies and programs discussed within this chapter.

The CVLP will be recalibrated as needed (as described under Alternative B in Volume I of this EIS, TVA proposes to update the target ranges of the CVLP to incorporate the findings of the eight proposed RLMPs). The CVLP was based, in part, on the anticipation that some parcels of land may be better allocated to different land use zones from those initially identified. For example, field assessments may identify additional areas that warrant the sensitive resource management allocation. In addition, during the creation or update of each individual RLMP, TVA may determine, either for its own management purposes or as a result of public input, that certain parcels of land should be used differently from how they have been used in the past. The preliminary results of the Wilson Reservoir planning effort have been included in determining the proposed revisions to the CVLP. The draft Wilson RLMP and proposed revisions to the CVLP will be included in the five-year cyclic review of the NRP.

CHAPTER 2. REGIONAL OVERVIEW

The headwaters of the Tennessee River are in eastern Tennessee, in southwestern Virginia, western North Carolina, and in northern Georgia. The Tennessee River is formed by the confluence of the Holston and French Broad rivers just above Knoxville, Tennessee. The river flows in a southwesterly direction through Tennessee, crosses northern Alabama, forms a small portion of the northeastern boundary of Mississippi, and then flows north through western Tennessee and western Kentucky to empty into the Ohio River at Paducah, Kentucky, a distance of about 650 miles. The Tennessee River drains an area of 40,910 square miles, about equal to the area of Ohio. The headwaters are in the Great Smoky Mountains and the Blue Ridge Mountains, which are the highest ranges east of the Rockies. The mountain region is in a striking contrast to the relatively flat lands of northern Alabama and to the rolling land of western Kentucky.

The series of rapids between the cities of Decatur and Florence, Alabama, through which the Tennessee River falls 134 feet in 37 miles, created a formidable obstacle to transportation during the early period of settlement when water routes constituted almost the only avenue of penetration into the wilderness west of the Alleghenies. The 16-mile reach at the downstream end of these rapids, where the river falls 100 feet, is the famous Muscle Shoals. The obvious desirability of continuous navigation along the river resulted in many plans and suggestions for improvement and with the advent of organized government in the territory, two attempts were made to construct canals and locks to bypass the shoals. These canals, although eventually constructed and used, were inadequate, expensive to maintain and operate, and of little lasting benefit.

The growing utilization of hydroelectric power introduced a possible solution to the navigation problem by making possible a multi-purpose, income-producing development. Starting in 1898 and continuing until September 1917, when Muscle Shoals was selected as the site for the power dam and nitrate fixation plant authorized in the National Defense Act of June 3, 1916, various bills were introduced and reports issued concerning the disposition and development of the site. Most of these proposals involved a government subsidy to cover cost of navigation facilities; the utilization and the installation of power facilities were planned to be available for private development.

Construction of Wilson Dam was started in 1918, suspended owing to lack of congressional appropriations in 1920, resumed in 1922, and completed in 1925. From 1921 to May 1933, negotiations with private companies, first for the site, the nitrate plant, and the partially completed dam, and later for the dam and nitrate plant, made the disposition of the property a national issue but did not culminate in any definite or permanent working agreements. Negotiations ended with the assignment of the property to TVA on May 18, 1933.

2.1 Muscle Shoals and Wilson Dam Reservation

The United States (U.S.) War Department constructed U.S. Nitrate Plant No. 2 between February and October 1918 to produce nitrates for World War I munitions. Wilson Steam Plant, the largest of its kind when it was constructed in 1918, provided electric power to U.S. Nitrate Plant No. 2 during the war effort. TVA assumed custody and control of these facilities in 1933 when Congress directed its transfer to TVA from the U.S. War Department. TVA immediately began converting the nitrate facilities to produce fertilizers. From those days through the early 1940s, TVA developed and distributed fertilizers to help improve agriculture in the Tennessee Valley region. During World War II, TVA converted its fertilizer production facilities back to the manufacture of munitions as well as synthetic rubber (TVA 2011b).

These facilities supplied more than 60 percent of the elemental phosphorus needed for munitions and produced more than 200,000 tons of calcium carbide for the manufacture of synthetic rubber (Lord, Aeck, and Sargent Architecture 2009). During the Korean Conflict, TVA again produced munitions essential to that military effort.

In 1952, TVA began operation of two plants on the Muscle Shoals and Wilson Dam Reservation (reservation) for the U.S. Army: a chlorine plant and the Phosphate Development Works (PDW), which produced methyl phosphorous dichloride and methyl phosphoric dichloride, components used in the manufacturing of a nerve agent. In 1954, the chlorine plant was sold to a private company. In 1958, the PDW ceased operations and was placed on standby; in 1992, the PDW was demolished.

For over 50 years, TVA operated a fertilizer research and development facility at Muscle Shoals. It became internationally recognized for its fertilizer research, demonstrations, production, and patents. About 75 percent of fertilizers and fertilizer technology used around the world today were developed or improved during the 1950s to 1970s by scientists and engineers at TVA. An investment of $41 million in fertilizer research through 1981 returned $57 billion to U.S.

agriculture, excluding benefits of the technology to the rest of the world. Thus, a benefit-to-cost ratio of more than $20 to $1 was recognized (International Fertilizer Development Center 2008).

In the early 1960s, the Muscle Shoals fertilizer complex was named the National Fertilizer Development Center (NFDC). While TVA had long been involved in identifying and addressing environmental issues related to fertilizer development and use since NFDC's inception, by 1988 TVA's environmental thrust began to become the focal point of the NFDC's mission. In January 1990, to emphasize its environmental commitment, TVA changed the name of the NFDC to the National Fertilizer and Environmental Research Center (NFERC). In May 1990, TVA closed the large-scale fertilizer production facilities and transitioned them to small-scale prototype plants. Through 1993, these facilities were used in experimental production of more environmentally friendly fertilizer products or in production of fertilizers by utilizing industrial by-products. By February 1994, a major refocusing of the NFERC's activities to environmental research, development, and technology transfer was complete. At that time, the name of the Muscle Shoals facility was changed from NFERC to the TVA Environmental Research Center, as it remains today (TVA 2011b).

2.2 Wilson Reservoir and Present Shoreline

Approximately 3,030 acres surrounding the Wilson Dam Reservation and reservoir were acquired in fee simple; the remainder of the property surrounding the reservoir was secured via flowage easements to varying mean sea level (msl) contours. TVA assumed custody and control of the project in 1933. In terms of power generation, Wilson Dam is the largest conventional hydroelectric facility in the TVA system. Only Raccoon Mountain Pumped-Storage Plant near Chattanooga can generate more hydroelectric power. Wilson Dam has 21 generating units with a net dependable capacity of 653 megawatts. Net dependable capacity is the amount of power a dam can produce on an average day, minus the electricity used by the dam itself.

Wilson Dam is 137 feet high and stretches 4,541 feet across the Tennessee River at river mile 259.4. Wilson Reservoir provides 166 miles of shoreline and 15,500 acres of water surface for recreation and navigation. Designed to be a run-of-river project, the reservoir has a minimal flood-storage capacity of 50,500 acre-feet. The main lock at Wilson is 110 feet by 600 feet. With a maximum lift of 100 feet, it is the highest single lift lock east of the Rockies. An auxiliary lock has two 60-foot by 300-foot chambers that operate in tandem. On average, 3,700 vessels pass through Wilson's locks each year.

Present Shoreline

During the early 1990s, TVA received a variety of proposals for development and use of the approximately 3,030 acres of reservation property by nonfederal entities. Rather than try to accommodate the various requests, TVA decided to first determine how much of the reservation was needed for TVA use, and then identify portions of the reservation that could be made available to others to meet non-TVA needs (TVA 1996). From 1996 to 2012, TVA relied on allocations in the 1996 Muscle Shoals/Wilson Dam Reservation Land Use Plan to guide decision-making regarding the use of reservation lands. Approximately 1.7 acres of the reservation were sold consistent with the 1996 Reservation Land Use Plan.

In November 2011, TVA completed an EIS on the potential sale of 1,400 acres of the reservation and various types of future development affecting the area (TVA 2011b). The reservation is a unique piece of property in TVA's land holdings and was designated as non-reservoir property in the EIS. In November 2012, the TVA Board determined that TVA had no further need of the fee interest in approximately 1,000 acres of the reservation. The remaining 400 acres that was included in the EIS study area will remain in TVA’s custody and control to support redevelopment efforts until otherwise directed by the TVA Board or its designee.

As part of this land planning effort, TVA evaluated the non-reservoir property designation and allocations from the 1996 Reservation Land Use Plan for the remaining approximate 1,630 acres of property. Approximately 280 acres were designated as TVA Power Property because the property supports infrastructure associated with the Power Service Shop and a substation. An additional 99 acres were designated as TVA Corporate Property because the property holds buildings and property supporting the future development of the reservation. Approximately 25.7 acres were included in the 2002 Pickwick RLMP and approximately 1.8 acres were included in the 2016 draft Wheeler RLMP. The remaining 1,223 acres were evaluated for either a reservoir or non-reservoir property designation. TVA has managed the property and allowed contractual agreements for actions within the parameters listed within Table 3-1. The 1,223 acres has geographical similarities to other reservoir properties throughout the Valley. TVA reviewed the previous land management techniques, geographical similarities along with governance associated with the Land Policy and determined the reservoir property designation better suited the property. Therefore, the approximate 1,223 acres of property are the scope of this RLMP.

2.2.1 Land Use and Prime Farmland

As described above, TVA owns and manages approximately 1,223 acres of land on Wilson Reservoir. A special land plan study was completed on a portion of Wilson near the dam in 1996 but TVA has never completed a RLMP for the entire reservoir. The shoreline of Wilson Reservoir is primarily composed of forested areas, with residential, commercial and recreation areas developed primarily in the vicinity of the surrounding cities of Muscle Shoals, Florence and Killen. Some agricultural land is found in rural areas along the reservoir. These uses are generally reflected in the land cover database for the parcels around the reservoir and the surrounding area which identifies land cover in these areas as primarily forested and developed areas with a relatively large amount of developed areas classified as developed open space and low intensity development. Developed open space includes single family housing units on large lots, parks, golf courses, and vegetation planted in developed settings for recreation, erosion control, or aesthetic purposes. Land cover classified as developed, low intensity includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for less than 50 percent of the total land cover. A relatively high percentage of land cover within the vicinity of the reservoir is classified as some variation of agricultural land.

According to TVA's SMI EIS, TVA owns approximately 13 miles of the 166 miles of shoreline (8 percent) on Wilson Reservoir (see Volume I, Table 3-1). Approximately 92 percent of the shoreline miles on this reservoir is privately owned, and is available for shoreline access development (see Volume I, Table 3-2). In the SMI EIS, TVA estimated that of that 92 percent, approximately 57 percent of this privately owned shoreline is currently developed with residential subdivisions. TVA has holds flowage easement rights along portions of this private shoreline.

As identified in Section 2.2 most of the property surrounding the reservoir was secured via flowage easements. Some of this land had been sold or designated as non-reservoir property, however, any structures placed within existing flowage easements or within the 500-year floodplain are subject to Section 26a of the TVA Act. Section 26a of the TVA Act requires that TVA's approval be obtained prior to the construction, operation, or maintenance of any dam, appurtenant works, or other obstruction affecting navigation, flood control, or public lands or reservations along or in the Tennessee River or any of its tributaries.

TVA public land on the Wilson Reservoir contains 338.1 acres of prime farmland and 97.2 acres of farmland of state importance (Table 2-1). Prime farmland has soil with the best combination

of physical and chemical characteristics for producing food and fiber and is protected from conversion to industrial and nonagricultural uses by the United States Department of Agriculture (USDA). It is noted, however, that current soil mapping of prime farmland soils does not account for existing developed uses that may have previously disturbed and potentially converted prime farmland.

Table 2-1. Prime Farmland and Farmland of Statewide Importance on Wilson Reservoir

Zone	Prime Farmland (acres)	Farmland of Statewide Importance (acres)
Zone 2 – Project Operations	262.1	75.8
Zone 3 – Sensitive Resource Management	0.0	0.0
Zone 4 – Natural Resource Conservation	0.0	0.0
Zone 5 – Industrial	0.0	0.0
Zone 6 – Developed Recreation	76.0	20.9
Zone 7 – Shoreline Access	0.0	0.6
Total	**338.1**	**97.2**

Source: USDA Natural Resources Conservation Service 2016

The majority (262.1 and 75.8 acres) of both prime farmland and farmland of statewide importance would be designated to Zone 2, where major soil disturbance could occur when TVA or other public facilities are constructed. However, most parcels that would be designated for Zone 2 already contain facilities that are not likely to require substantial modification. Of the 76.0 acres of prime farmland and 20.9 acres of farmland of statewide importance included in Zone 6, major soil disturbances could occur in specific locations, if recreation facilities are constructed. Conversely, large areas could remain unaffected for more dispersed recreation management. There is only 0.6 acre of farmland of statewide importance proposed for Zone 7. There is no prime farmland or farmland of statewide importance included in any lands that would be designated for Zones 3, 4, or 5.

For information on land use and prime farmland and potential impacts of the draft RLMP, see Volume I, Sections 3.2 and 3.3.

2.2.2 Recreation

TVA provides public lands for developed and dispersed recreational purposes through the reservoir lands planning process. Developed recreation include campgrounds, lodges, marinas, boat ramps, parks, swimming pools, beaches and golf courses. Dispersed recreation activities

include picnicking, primitive camping, hiking, bank fishing, hunting, kayaking and canoeing. In 2005, TVA developed a recreation strategic plan aimed at collaboratively enhancing recreational opportunities and addressing unmet recreational needs while managing the resources of the Tennessee River system (TVA 2005). This strategy laid out guiding principles for how to best design and develop recreation opportunities. During this reservoir lands planning effort, proposed uses of tracts of TVA-managed lands around Wilson Reservoir were categorized based upon a suitable use that is consistent with TVA policy and guidelines and applicable laws and regulations.

At the Wilson Reservoir, developed recreation provides modern facilities and amenities such as campgrounds, developed boat launches/ramps, parks and a myriad of day use facilities (picnic areas, swimming beaches, and fishing piers). These uses primarily occur on TVA lands that would be allocated to Zone 6 (Developed Recreation) and Zone 2 (Project Operations). TVA proposes to allocate approximately 12 percent (148.5 acres) of TVA land on Wilson Reservoir to Zone 6 and approximately 88 percent (1,072 acres) to Zone 2 (see Figure 3-1).

Wilson Reservoir is an outdoor recreation resource that attracts visitors from within and outside the region. Five recreation areas have been developed on the Wilson Reservoir including public parks and access areas and commercial recreation operations. Many of these recreation areas are located on properties that TVA transferred, leased or licensed for recreation development and use. Two public parks were developed on lands made available by TVA and include the River Heritage Park and the Veteran's Memorial Park. Recreation facilities at the Veteran's Memorial Park include athletic fields, picnic shelters, tennis courts and a disc golf (Frisbee golf) course (City of Florence 2016). The River Heritage Park includes trails and a splash pad for recreation. Other public agencies have also developed boat ramps on TVA lands. For a discussion of additional nearby recreational facilities, see Section 2.3.

Table 2-2 itemizes developed recreation area lands that are managed by TVA or another public agency for recreation purposes. Table 2-3 summarizes commercial, private, and semi-private developed recreation areas. Tables 2-2 and 2-3 do not itemize recreation areas on non-TVA shorelands (Zone 1) because these areas are beyond the scope of this RLMP. Wilson Reservoir parcel descriptions (see Chapter 4) further describe the management entity and management descriptions of recreation facilities on lands managed by either TVA or under contractual agreement.

Table 2-2. Developed Public Recreation Areas on TVA Lands on the Wilson Reservoir

Recreation Area	Managing Entity	Parcel Location
River Heritage Park	City of Florence	2
Veteran's Memorial Park	City of Florence	4
Boat Ramp	State of Alabama	6
Lock Six Boat Ramp	City of Killen	7

Table 2-3. Developed Commercial, Private and Semi-Private (camps) Recreation Areas on TVA Lands on the Wilson Reservoir

Recreation Area	Managing Entity	Parcel Location
Marriott Shoals Hotel and Spa	Marriott Hotels and Resorts	2

Some of the TVA lands around Wilson Reservoir provide excellent opportunities for dispersed or nature- based recreation activities. Dispersed recreation would occur on lands allocated to Zone 2 (Project Operations) and undeveloped areas allocated Zone 6 (Developed Recreation). For example, appropriate dispersed recreation activities on lands that would be allocated to Zone 2 include hiking, picnicking, wildlife observation, fishing and camping on undeveloped sites.

For more information on recreation resources and the potential impacts of the draft RLMP, see Volume I, Section 3.4.

2.2.3 Terrestrial Ecology

Wilson Reservoir lies within the Interior Plateau ecoregion (USEPA 2013). The Interior Plateau ecoregion is a series of grassland plateaus and forested uplands that are generally lower in elevation than the Appalachian Mountains to the east but higher than the plains to the south. The variety of landforms, soils, climate, and geology across the Interior Plateau ecoregion has allowed for an extremely diverse assemblage of animals, including migratory birds of conservation concern. Deciduous forests and mixed evergreen-deciduous forests provide wildlife habitat among the agriculture and more urbanized areas (USGS 2016). Land cover within and in the vicinity of Wilson Reservoir is summarized in Table 2-4.

Table 2-4. Land Cover on TVA Owned Parcels and within the Vicinity of Wilson Reservoir

Land Cover Type	TVA Property		Vicinity (5-mile radius)	
	Acres[1]	Percent Cover (%)	Acres[1]	Percent Cover (%)
Barren Land	0	0.0	152.0	0.1
Developed				
Developed, High Intensity	3.7	0.3	1,610.6	0.6
Developed, Medium Intensity	47.5	3.9	4,123.9	1.6
Developed, Low Intensity	100.0	8.2	11,977.4	4.8
Developed, Open Space	192.1	15.7	21,325.9	8.5
Forest				
Deciduous Forest	491.2	40.2	50,371.9	20.1
Evergreen Forest	92.4	7.6	5,750.8	2.3
Mixed Forest	150.3	12.3	6,757.6	2.7
Shrubland				
Shrub/Scrub	46.9	3.8	12,618.5	5.0
Herbaceous				
Grassland/Herbaceous	12.5	1.0	3,858.4	1.5
Hay/Pasture	31.9	2.6	69,821.1	27.8
Planted/Cultivated				
Cultivated Crops	0	0.0	29,838.9	11.9
Wetlands/Open Water				
Woody Wetlands	26.3	2.1	8,052.9	3.2
Emergent Herbaceous Wetlands	0	0.0	120.6	0.0
Open Water	28.6	2.3	24,584.5	9.8
Total	**1,223.4**	**100.0**	**250,964.8**	**100.0**

[1] Source: Homer et al 2015

Oak-hickory deciduous forest is the most abundant forest type in the eastern U.S. and is prevalent in the Wilson Reservoir region. Some mixed deciduous-evergreen and evergreen forests are also present in this region. Numerous bird species nest in deciduous forests. Typical species include wild turkey, whip-poor-will, ruby-throated hummingbird, red-eyed vireo, wood thrush, black-throated green warbler, black-and-white warbler, ovenbird, hooded warbler, and the scarlet tanager. Several additional migratory bird species of concern utilize these habitats in this area including chuck-will's widow, Kentucky warbler, red-headed woodpecker, wood thrush and worm-eating warbler (USFWS 2016a). Common mammal species of deciduous forests

include white-tailed deer, red bat, eastern chipmunk, eastern gray squirrel, southern flying squirrel, white-footed mouse, cotton deermouse, short-tailed shrew, gray fox, and bobcat.

Deciduous forests and mixed evergreen-deciduous forests account for 53 percent of the land cover within the Wilson Reservoir parcels (see Table 2-4). Evergreen forests make up an additional eight percent of the land cover. Seeps, streams, and temporary ponds in deciduous forests provide habitat for numerous amphibians including American and Fowler's toads, green frog, northern cricket frog, and other frogs, and a range of salamanders including spotted and mole salamanders. Reptiles commonly found in deciduous forests especially near water include eastern fence lizard, ground skink, five-lined skink, eastern box turtle, eastern worm snake, black racer, and ring-necked snake. The riparian zones along streams within deciduous forests provide nesting habitat for Acadian flycatchers, northern parula, and Louisiana waterthrush.

Evergreen and mixed evergreen-deciduous forests provide nesting for woodland birds including pine and yellow-throated warblers, and great crested flycatcher. Several additional migratory bird species of concern utilize these habitats in this area including chuck-will's widow, Kentucky warbler, fox sparrow, and prairie warbler (USFWS 2016a). Portions of this forest type have been damaged by southern pine beetles in recent years. Several stands of dead pines exist on TVA lands, and TVA has performed salvage harvests in some stands. Dead pines provide foraging sites for woodpeckers and roosting sites for silver-haired bats. Other animals that inhabit evergreen and evergreen-deciduous forests but are not restricted to them include white-tailed deer, wild turkey, black bear, eastern mole, eastern kingsnake, smooth earth snake, eastern fence lizard, six-lined racerunner, and a variety of salamanders, frogs, and toads, especially near wet areas.

Non-forested herbaceous community types in the Wilson Reservoir region are dominated by pasturelands and hayfields. Herbaceous habitats, including grasslands, barrens, hayfields, and pastures account for approximately four percent of the land cover on the reservoir parcels (see Table 2-4). Early successional habitats provide habitat for a variety of bird species including eastern bluebird, eastern meadowlark, American crow, and red-tailed hawk. Several additional migratory bird species of concern utilize these habitats in this area including American kestrel, dickcissel, sedge wren, and short-eared owl (USFWS 2016a). Amphibians and reptiles that use these habitats include spring peeper, chorus frog, and common garter snake.

Bird and mammal diversity greatly increases at edge habitats especially those between forested areas bordered by early successional habitats. Birds commonly found at these edge habitats include wild turkey, great crested flycatcher, white-eyed vireo, Carolina wren, blue-gray gnatcatcher, brown thrasher, blue-winged warbler, prairie warbler, common yellowthroat, yellow-breasted chat, indigo bunting, eastern towhee, field and song sparrow, and orchard oriole. Several additional migratory bird species of concern utilize these habitats in this area including Bachman's sparrow, blue-winged warbler, dickcissel, loggerhead shrike, and red-headed woodpecker (USFWS 2016a). Mammals typically inhabiting edges include eastern cottontail, eastern harvest mouse, red fox, coyote, and striped skunk.

The reservoir parcels provide wetlands and open water habitats and associated riparian zones that are used by a variety of wildlife. Common species include great blue heron, green heron, belted kingfisher, common yellowthroat, and northern parula. Many additional migratory bird species of concern utilize these habitats in this area including bald eagle, least bittern, prothonotary warbler, rusty blackbird, sedge wren, short-eared owl, and Swainson's warbler (USFWS 2016a). Two colonial nesting bird colonies/heronries have been observed on TVA parcels on Wilson Reservoir (TVA 2016b). Shallow embayments, especially those with emergent vegetation, provide foraging habitat for waterfowl. Common waterfowl include wood ducks, Canada geese, and mallards. Other waterfowl periodically present include American black duck, gadwall, green-winged teal, ring-necked duck, lesser scaup, common goldeneye, bufflehead, hooded merganser, and common merganser.

Shorebird use of the Wilson Reservoir is limited to shallow embayments and exposed mud flats. Species such as spotted sandpiper that forage along the margins of reservoirs and killdeer that are not restricted to foraging on mud flats are commonly observed. Common amphibians found in the riparian zones include green frog, eastern narrowmouth toad, and Fowler's toad. Reptiles include northern water snake, common snapping turtle, and painted turtles. Common mammals include mink, muskrat, raccoon, and American beaver.

A search of the TVA Natural Heritage database in May 2016 indicated that 22 caves are located within three miles of Wilson Reservoir. One cave is located on a TVA parcel (TVA 2016b).

For information on terrestrial ecology and potential impacts of the draft RLMP, see Volume I, Section 3.5.

2.2.3.1 Invasive Nonnative Species

Many of the planned TVA parcels around Wilson Reservoir contain a substantial amount of invasive nonnative species. Executive Order 13112 defines an invasive nonnative species as any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem; and whose introduction does or is likely to cause economic or environmental harm or harm to human health.

The Southeastern Exotic Plant Pest Council provides a list of nonnative invasive species that could pose potential threats to native ecosystems and human health for each southeastern state. In reviewing the Alabama exotic plant pest list (Alabama Invasive Plant Pest Council 2012), there were 19 species occurring in Alabama that pose a severe threat to native ecosystems observed in the Wilson Reservoir region (Table 2-5).

Table 2-5. Invasive Non-native Species that Pose a Severe Threat Known to Occur in Alabama

Common Name	Scientific Name
Alligatorweed	Alternanthera philoxeroides
Aquarium water-moss	*Salvinia molesta*
Chinese privet	*Ligustrum sinense*
Chinese wisteria	*Wisteria sinensis*
Cogongrass	*Imperata cylindrica*
Common water hyacinth	*Eichhornia crassipes*
English ivy	*Hedera helix*
Eurasian water milfoil	*Myriophyllum spicatum*
Hydrilla	*Hydrilla verticillata*
Japanese climbing fern	*Lygodium japonicum*
Japanese honeysuckle	*Lonicera japonica*
Japanese stiltgrass	*Microstegium vimineum*
Kudzu	*Pueraria montana var. lobata*
Mimosa	*Albizia julibrissin*
Multiflora rose	*Rosa multiflora*
Parrot feather watermilfoil	*Myriophyllum aquaticum*
Sericia lespedeza	*Lespedeza cuneata*
Tallowtree	*Triadica sebifera*
Water lettuce	*Pistia stratiotes*

Source: Alabama Invasive Plant Pest Council 2012

All of these species have the potential to adversely impact the native plant communities because of their potential to spread rapidly and displace native vegetation. TVA considers all of these species a severe threat to local plant communities.

In addition to invasive or non-native plant species discussed above, there are several exotic, non-native, and/or pest insect species and plant diseases that are known to occur within the counties encompassing Wilson Reservoir. These insects and diseases can have devastating impacts on native plant communities and human crops/fruits. The insects include: Japanese beetle, (*Popillia japonica*), brown marmorated stink bug (*Halyomorpha halys*), kudzu bug (*Megacopta cribraria*), southern pine beetle (*Dendroctonus frontalis*), and sugarcane aphid (*Melanaphis sacchari*) (EDDMapS 2016). These species all have the potential to pose problems to native vegetation, wildlife, crops, landscaping and gardens, and/or overall ecosystems due to the lack of natural predators or diseases to help control their populations giving them the ability to out-compete native species.

The following plant diseases are also known to occur in the counties containing Wilson Reservoir: butternut canker (*Sirococcus clavigignenti-juglandacearum*), dogwood anthracnose (*Discula destructive*), fusiform rust (*Cronartium quercuum* f.sp. *fusiforme*), and Heterobasidion root rots (*Heterobasidion* spp.). Many of these diseases target certain plant species or groups of species, and can have serious impacts to local populations of those plants and trees.

There are several exotic, non-native, and/or pest terrestrial wildlife and other insect species that are known to occur within the region. These include: Asian tiger mosquito (*Aedes albopictus*), cat (feral) (*Felis catus*), and European starling (*Sturnus vulgaris*) (EDDMapS 2016). These species have the potential to pose problems to native wildlife and ecosystems due to their ability to out-compete native species and spread quickly. Some of these species can pose threats to human health and safety. Asian tiger mosquitoes are known to transmit various diseases to humans.

2.2.4 Aquatic Ecology

Aquatic ecological conditions in streams and reservoirs are monitored under a number of TVA programs. Aquatic ecological conditions in the larger reservoirs have been monitored using the Reservoir Vital Signs Monitoring Program (RVSMP), which focuses on (1) physical and chemical characteristics of waters; (2) physical and chemical characteristics of sediments; (3) sampling the benthic macroinvertebrate community; and (4) fish assemblage sampling. The

RVSMP data includes annual fish sampling on tributary reservoirs on a two-year rotation sampling cycle. Ratings are based primarily on fish community structure and function, using an analysis tool known as the Reservoir Fish Assemblage Index (RFAI) (McDonough and Hickman 1999).

Both RFAI and benthic community samples are taken in the forebay area (near the dam) and inflow of Wilson Reservoir (Table 2-6). Ratings for Wilson Reservoir have fluctuated in a pattern that generally follows reservoir flow conditions, primarily due to the influence of flows on dissolved oxygen in the forebay. Like most Tennessee River main-stem reservoirs, Wilson tends to rate better in years with higher flow and worse in dry years that result in extended periods of low flow.

Table 2-6. RFAI and Benthic Community Scores for Wilson Reservoir (2010-2014)

Year	RFAI Scores		Benthic Community Scores	
	Forebay	Inflow	Forebay	Inflow
2010	Fair	Fair	--	--
2012	Good	Fair	Poor	Good
2014	Good	Good	Poor	Fair

Source: TVA 2016a

The fish assemblage has consistently scored at the upper end of the fair range to good at the forebay whereas scores at the inflow have fluctuated within the fair range except for a poor rating in 2000, which was a low flow year. The fish species collected during the RVSMP sampling efforts represent typical species found in large river and lentic habitats (Table 2-7). The benthic community has rated poor or at the low end of the fair range each year at the forebay, probably due to low oxygen levels near the reservoir bottom and lack of good habitat. The bottom life indicator typically rates good or high fair at the inflow location.

Table 2-7. Fish Species in Wilson Reservoir

Common Name	Scientific Name
Bigmouth buffalo	*Ictiobus cyprinellus*
Black crappie	*Pomoxis nigromaculatus*
Black redhorse	*Moxostoma duquesnei*
Blue catfish	*Ictalurus furcatus*
Bluegill	*Lepomis macrochirus*
Bowfin	*Amia calva*

Common Name	Scientific Name
Brook silverside	*Labidesthes sicculus*
Brown bullhead	*Ameiurus nebulosus*
Channel catfish	*Ictalurus punctatus*
Common carp	*Cyprinus carpio*
Emerald shiner	*Notropis atherinoides*
Flathead catfish	*Pylodictis olivaris*
Freshwater drum	*Aplodinotus grunniens*
Gizzard shad	*Dorosoma cepedianum*
Golden redhorse	*Moxostoma erythrurum*
Golden shiner	*Notemigonus crysoleucas*
Grass carp	*Ctenopharyngodon idella*
Hybrid striped x white bass	*Hybrid morone (chrysops x sax)*
Largemouth bass	*Micropterus salmoides*
Largescale stoneroller	*Campostoma oligolepis*
Logperch	*Percina caprodes*
Longear sunfish	*Lepomis megalotis*
Longnose gar	*Lepisosteus osseus*
Mississippi silverside	*Menidia audens*
Northern hog sucker	*Hypentelium nigricans*
Redbreast sunfish	*Lepomis auritus*
Redear sunfish	*Lepomis microlophus*
River redhorse	*Moxostoma carinatum*
Rock bass	*Ambloplites rupestris*
Silver redhorse	*Moxostoma anisurum*
Skipjack herring	*Alosa chrysochloris*
Smallmouth bass	*Micropterus dolomieu*
Smallmouth buffalo	*Ictiobus bubalus*
Spotfin shiner	*Cyprinella spiloptera*
Spotted bass	*Micropterus punctulatus*
Spotted gar	*Lepisosteus oculatus*
Spotted sucker	*Minytrema melanops*
Striped shiner	*Luxilus chrysocephalus*
Threadfin shad	*Dorosoma petenense*
Warmouth	*Lepomis gulosus*
White bass	*Morone chrysops*
White crappie	*Pomoxis annularis*
Yellow bass	*Morone mississippiensis*
Yellow perch	*Perca flavescens*

Source: TVA 2016c

2.2.4.1 Invasive Nonnative Aquatic Species

Although there are many exotic or introduced aquatic species within the region, there are a few species that are considered more detrimental due to their ability to have broad impacts to overall aquatic systems as well as direct impacts to humans. These include Asian carp, especially bighead carp (*Hypophthalmichthys nobilis*) and silver carp (*Hypophthalmichthys molitrix*) (EDDMapS 2016), and zebra mussels (*Dreissena polymorpha*).

Asian carp cause serious damage to the native fish populations in the lakes and rivers that they infest because they out-compete other fish for food and space. Carp are also thought to lower water quality, which can kill off sensitive organisms like native freshwater mussels. Asian carp have been known to dominate entire streams, effectively pushing out the native species. Asian carp are also known to pose danger to humans due to their habit of jumping out of the water and striking boaters and water skiers and damaging boats and equipment.

Zebra mussels are notorious for their biofouling capabilities by colonizing water supply pipes of hydroelectric and nuclear power plants, public water supply plants, and industrial facilities. They colonize pipes constricting flow, therefore reducing the intake in heat exchangers, condensers, firefighting equipment, and air conditioning and cooling systems. Navigational and recreational boating can be affected by increased drag due to attached mussels. Small mussels can get into engine cooling systems causing overheating and damage. Navigational buoys have been sunk under the weight of attached zebra mussels. Zebra mussels can have profound effects on the ecosystems they invade. They primarily consume phytoplankton, but other suspended material is filtered from the water column including bacteria, protozoans, zebra mussel veligers, other microzooplankton and silt (Benson et al. 2016).

For information on aquatic ecology and potential impacts of the draft RLMP, see Volume I, Section 3.6.

2.2.5 Threatened and Endangered Species

TVA biologists and natural resource specialists used the TVA Natural Heritage database to assess the endangered and threatened species within and around Wilson Reservoir. The TVA Natural Heritage database was created to ensure that environmental compliance activities are conducted in a consistent manner across the TVA Region and that these activities meet the requirements of the National Environmental Policy Act (NEPA) and the Endangered Species Act.

Federally listed and state-listed species identified from the TVA Natural Heritage database searches that are known to occur in the two Wilson Reservoir counties are listed in Table 2-8. For the purpose of this document state-listed species include those that are being tracked, in need of management, candidates, proposed for listing and of special concern. As noted below, there are seven listed plants species occurring on TVA parcels on Wilson Reservoir, all of which are only state-listed. There is only one terrestrial wildlife species known to occur on TVA parcels, however, suitable habitat is present for many of the other listed species. No listed aquatic species are known to occur within TVA parcels, however ten species are known to occur in the reservoir adjacent to the parcels.

Table 2-8. Federally and State-Listed Species in the Wilson Reservoir Counties

Common Name	Scientific Name	Status	
		Federal	State
Amphibians			
Green salamander	*Aneides aeneus*	--	PROT (S3)
Hellbender	*Cryptobranchus alleganiensis*	PS	PROT (S2)
Birds			
Bald eagle	*Haliaeetus leucocephalus*	DM	PROT (S3)
Bewick's wren	*Thryomanes bewickii*	--	PROT (SH)
Cerulean warbler	*Setophaga cerulea*	--	NOST (S1)
Osprey	*Pandion haliaetus*	--	PROT (S5)
Red-cockaded woodpecker	*Picoides borealis*	LE	PROT (S2)
Warbling vireo	*Vireo gilvus*	--	TRKD (S1)
Crustaceans			
Alabama blind cave shrimp	*Palaemonias alabamae*	LE	SP (S1S2)
Troglobitic crayfish	*Cambarus jonesi*	--	SPCO (S2)
Troglobitic crayfish	*Procambarus pecki*	--	TRKD (S2?)
Fish			
Alabama cavefish	*Speoplatyrhinus poulsoni*	LE	PROT (S1)
Bigeye chub	*Hybopsis amblops*	--	TRKD (S3)
Blotched chub	*Erimystax insignis*	--	TRKD (S2)
Boulder darter	*Etheostoma wapiti*	LE	PROT (S1)
Crown darter	*Etheostoma corona*	--	TRKD (S2)
Fantail darter	*Etheostoma flabellare*	--	TRKD (S3)
Flame chub	*Hemitremia flammea*	--	TRKD (S3)
Gilt darter	*Percina evides*	--	TRKD (S2)
Greenside darter	*Etheostoma blennioides*	--	TRKD (S3)
Lollipop darter	*Etheostoma neopterum*	--	PROT (S1)
Mountain brook lamprey	*Ichthyomyzon greeleyi*	--	TRKD (S1)
Redline darter	*Etheostoma rufilineatum*	--	TRKD (S3)
Rosyface shiner	*Notropis micropteryx*	--	TRKD (S2)
Sawfin shiner	*Notropis sp.*	--	TRKD (S2)
Slackwater darter	*Etheostoma boschungi*	LT	PROT (S1)
Slender madtom	*Noturus exilis*	--	TRKD (S3)
Southern cavefish	*Typhlichthys subterraneus*	--	PROT (S3)
Southern redbelly dace	*Chrosomus erythrogaster*	--	TRKD (S3)
Spotfin chub	*Erimonax monachus*	LT	PROT (SX)
Spring pygmy sunfish	*Elassoma alabamae*	LT	PROT (S1)

Common Name	Scientific Name	Status	
		Federal	State
Stargazing minnow	*Phenacobius uranops*	--	TRKD (S1)
Stonecat	*Noturus flavus*	--	TRKD (S1)
Tuscumbia darter	*Etheostoma tuscumbia*	--	PROT (S2)
Gastropods			
Anthony's river snail	*Athearnia anthonyi*	LE	PROT (S1)
Armored rocksnail	*Lithasia armigera*	--	TRKD (S1)
Atlas pebblesnail	*Somatogyrus humerosus*	--	HIST (SH)
Corpulent hornsnail	*Pleurocera corpulenta*	--	TRKD (S1)
Golden pebblesnail	*Somatogyrus aureus*	--	HIST (SH)
Knob mudalia	*Leptoxis minor*	--	EXTI (S?)
Muddy rocksnail	*Lithasia salebrosa*	--	TRKD (S1)
Ornate rocksnail	*Lithasia geniculate*	--	TRKD (S1)
Ovate pebblesnail	*Somatogyrus excavatus*	--	HIST (SH)
Rolling pebblesnail	*Somatogyrus strengi*	--	THR (SH)
Round-rib elimia	*Elimia nassula*	--	TRKD (S1)
Rugged hornsnail	*Pleurocera alveare*	--	TRKD (S2)
Shortspire hornsnail	*Pleurocera curta*	--	TRKD (S1S2)
Slowwater elimia	*Elimia interveniens*	--	TRKD (S2)
Spiral hornsnail	*Pleurocera brumbyi*	--	TRKD (S2)
Telescope hornsnail	*Pleurocera walker*	--	TRKD (S3)
Varicose rocksnail	*Lithasia verrucosa*	--	TRKD (S3)
Warty rocksnail	*Lithasia lima*	--	HIST (SH)
Insects			
A beetle	*Batrisodes specus*	--	TRKD (S2)
A beetle	*Catops gratiosa*	--	PROT (S2)
A beetle	*Batrisodes jonesi*	--	TRKD (S2)
A beetle	*Batrisodes tumoris*	--	TRKD (S1)
A beetle	*Batriasymmodes spelaeus*	--	TRKD (S3)
A caddisfly	*Rhyacophila fenestra*	--	RARE (S1)
A caddisfly	*Hydropsyche rotosa*	--	RARE (S1)
A caddisfly	*Chimarra socia*	--	TRKD (S1)
A caddisfly	*Psilotreta labida*	--	TRKD (S1)
A ground Beetle	*Rhadine caudata*	--	TRKD (S2)
A springtail	*Folsomia candida*	--	TRKD (S1)
A glossosomatid caddisfly	*Agapetus gelbae*	--	RARE (S1)
Mammals			
Appalachian cottontail	*Sylvilagus obscurus*	--	TRKD (S1)
Gray bat	*Myotis grisescens*	LE	PROT (S2)
Indiana bat	*Myotis sodalis*	LE	PROT (S2)
Long-tailed weasel	*Mustela frenata*	--	PROT (S3)
Northern long-eared bat	*Myotis septentrionalis*	LT	PROT (S2)
Rafinesque's big-eared bat	*Corynorhinus rafinesquii*	--	PROT (S2)
Southeastern bat	*Myotis austroriparius*	--	PROT (S2)
Tricolored bat	*Perimyotis subflavus*	--	NOST (S3)
Mussels			
Acornshell	*Epioblasma haysiana*	--	EXTI (SH)
Alabama lampmussel	*Lampsilis virescens*	LE	PROT (S1)
Angled riffleshell	*Epioblasma biemarginata*	--	EXTI (SX)
Birdwing pearlymussel	*Lemiox rimosus*	LE	PROT (SX)
Black sandshell	*Ligumia recta*	--	TRKD (S2)
Butterfly	*Ellipsaria lineolata*	--	TRKD (S3)

Common Name	Scientific Name	Status	
		Federal	State
Clubshell	*Pleurobema clava*	LE	PROT (SX)
Cracking pearlymussel	*Hemistena lata*	LE	PROT (SX)
Creeper	*Strophitus undulatus*	--	TRKD (S1)
Cumberland leafshell	*Epioblasma stewardsonii*	--	EXTI (SX)
Cumberland moccasinshell	*Medionidus conradicus*	--	PROT (S1)
Cumberland monkeyface	*Quadrula intermedia*	LE	PROT (S1)
Cumberlandian combshell	*Epioblasma brevidens*	LE	PROT (S1)
Deertoe	*Truncilla truncata*	--	TRKD (S1)
Dromedary pearlymussel	*Dromus dromas*	LE	PROT (S1)
Elktoe	*Alasmidonta marginata*	--	EXTI (SX)
Fanshell	*Cyprogenia stegaria*	LE	PROT (S1)
Fine-rayed pigtoe	*Fusconaia cuneolus*	LE	PROT (S1)
Fluted kidneyshell	*Ptychobranchus subtentum*	LE	PROT (SX)
Hickorynut	*Obovaria olivaria*	--	EXTI (SX)
Kidneyshell	*Ptychobranchus fasciolaris*	--	TRKD (S1)
Lilliput	*Toxolasma parvum*	--	TRKD (S3)
Long-solid	*Fusconaia subrotunda*	--	TRKD (S1)
Monkeyface	*Quadrula metanevra*	--	TRKD (S3)
Mucket	*Actinonaias ligamentina*	--	TRKD (S2)
Ohio pigtoe	*Pleurobema cordatum*	--	TRKD (S2)
Orange-foot pimpleback	*Plethobasus cooperianus*	LE	PROT (S1)
Orange-nacre mucket	*Lampsilis perovalis*	LT	PROT (S2)
Oyster mussel	*Epioblasma capsaeformis*	LE	PROT (SX)
Painted creekshell	*Villosa taeniata*	--	TRKD (S3)
Pale lilliput	*Toxolasma cylindrellus*	LE	PROT (S1)
Pheasantshell	*Actinonaias pectorosa*	--	TRKD (S1)
Pink mucket	*Lampsilis abrupta*	LE	PROT (S1)
Pink papershell	*Potamilus ohiensis*	--	TRKD (S3)
Purple catspaw	*Epioblasma obliquata*	LE	PROT (SX)
Purple lilliput	*Toxolasma lividus*	--	TRKD (S2)
Pyramid pigtoe	*Pleurobema rubrum*	--	PROT (S2)
Rayed bean	*Villosa fabalis*	LE	PROT (SX)
Ring pink	*Obovaria retusa*	LE	PROT (S1)
Rock pocketbook	*Arcidens confragosus*	--	TRKD (S3)
Rough pigtoe	*Pleurobema plenum*	LE	PROT (S1)
Round combshell	*Epioblasma personata*	--	EXTI (SX)
Round hickorynut	*Obovaria subrotunda*	--	TRKD (S2)
Round pigtoe	*Pleurobema sintoxia*	--	TRKD (S1)
Scaleshell	*Leptodea leptodon*	LE	PROT (SX)
Sheepnose	*Plethobasus cyphyus*	LE	PROT (S1)
Shiny pigtoe pearlymussel	*Fusconaia cor*	LE	PROT (S1)
Slabside pearlymussel	*Pleuronaia dolabelloides*	LE	PROT (S1)
Slippershell mussel	*Alasmidonta viridis*	--	PROT (S1)
Smooth rabbitsfoot	*Quadrula cylindrica*	LT	PROT (S1)
Snuffbox	*Epioblasma triquetra*	LE	TRKD (S1)
Spectaclecase	*Cumberlandia monodonta*	LE	PROT (S1)
Spike	*Elliptio dilatata*	--	TRKD (S1)
Sugarspoon	*Epioblasma arcaeformis*	--	EXTI (SX)
Tennessee clubshell	*Pleurobema oviforme*	--	TRKD (S1)
Tennessee pigtoe	*Fusconaia barnesiana*	--	TRKD (S1)
Tennessee riffleshell	*Epioblasma propinqua*	--	EXTI (SX)

Common Name	Scientific Name	Status	
		Federal	State
Tuberculed blossom pearlymussel	*Epioblasma torulosa*	LE	PROT (SX)
Turgid blossom pearlymussel	*Epioblasma turgidula*	LE	EXTI (SX)
Wavy-rayed lampmussel	*Lampsilis fasciola*	--	TRKD (S1S2)
White heelsplitter	*Lasmigona complanata*	--	TRKD (S2S3)
White wartyback	*Plethobasus cicatricosus*	LE	PROT (S1)
Yellow-blossom pearlymussel	*Epioblasma florentina*	LE	PROT (SX)
Reptiles			
Alligator snapping turtle	*Macrochelys temminckii*	--	PROT (S3)
Coal skink	*Plestiodon anthracinus*	--	TRKD (S3)
Plants			
Alabama glade-cress	*Leavenworthia alabamica*	--	SLNS (S2)
Alabama jamesianthus	*Jamesianthus alabamensis*	--	SLNS (S3)
Allegheny-spurge	*Pachysandra procumbens*	--	SLNS (S2S3)
American columbo	*Frasera caroliniensis*	--	SLNS (S2)
Bastard toad-flax	*Comandra umbellata*	--	SLNS (S1)
Blue-eyed Mary	*Collinsia verna*	--	SLNS (S1)
Dutchman's breeches	*Dicentra cucullaria*	--	SLNS (S2)
False Rue-anemone	*Enemion biternatum*	--	SLNS (S2)
Fleshy-fruit gladecress	*Leavenworthia crassa*	LE	SLNS (S2)
French's shootingstar	*Dodecatheon frenchii*	--	SLNS (S1)
Gattinger prairie-clover	*Dalea gattingeri*	--	SLNS (S3)
Georgia rock-cress	*Arabis georgiana*	LT	SLNS (S1)
Harper's grooved-yellow flax	*Linum sulcatum var. harperi*	--	SLNS (S1)
Harper's umbrella-plant	*Eriogonum longifolium var. harperi*	--	SLNS (S1)
Heartleaved plantain	*Plantago cordata*	--	SLNS (S2)
Horse-gentian	*Triosteum angustifolium*	--	SLNS (S1)
Horsemint	*Monarda clinopodia*	--	SLNS (S2)
Leafy prairie-clover	*Dalea foliosa*	LE	SLNS (S1)
Little mountain meadow-rue	*Thalictrum mirabile*	--	SLNS (S2)
Lyre-leaf bladderpod	*Lesquerella lyrata*	LT	SLNS (S1)
Muhly grass	*Muhlenbergia sobolifera*	--	SLNS (S1)
Prairie trillium	*Trillium recurvatum*	--	SLNS (S2)
Southern meadow-rue	*Thalictrum debile*	--	SLNS (S2)
Sunnybell	*Schoenolirion croceum*	--	SLNS (S2)
Three-flowered hawthorn	*Crataegus triflora*	--	SLNS (S2)
Tuberous scurfpea	*Pediomelum subacaule*	--	SLNS (S2)
Wall-rue spleenwort	*Asplenium ruta-muraria*	--	SLNS (S1)
White lady-slipper	*Cypripedium candidum*	--	SLNS (S1)
White trout-lily	*Erythronium albidum*	--	SLNS (S1S2)

*Federal status abbreviations: LE = Listed endangered, LT = Listed threatened; PS = Partial status; C = Candidate; DM = Recovered, delisted, and being monitored
State status abbreviations: END = Endangered; THR = Threatened; NMGT = In need of management; SLNS = Listed by the State of Alabama, but not assigned a status; NOST = No status; PROT= Protected; SPCO= Special concern; TRKD = Tracked by state natural heritage program; S-CE = Special Concern - Commercially Exploited
State rank abbreviations: S1 = Critically imperiled, often with five or fewer occurrences, S2 =Imperiled, often with <20 occurrences; S3 = Rare or uncommon, often with <80 occurrences; S4 = Widespread, abundant, and apparently secure within the state, but with cause for long-term concern; SX = Believed to be extirpated from the state; SH = Of historical occurrence in Tennessee, e.g. formally part of the established biota, with the expectation that it may be rediscovered; S#S# = Denotes a range of ranks because the exact rarity of the element is uncertain (e.g., S1S2) ; S? = Unranked at this time or rank uncertain
Source: TVA 2016b

In order to determine which of the species listed in each county are known to occur in the general vicinity of the reservoir, a more refined database search was conducted. Database searches are based on the following criteria: (1) distance, (2) element occurrence rank values, and (3) species or type of element present. Accordingly, plants are assessed within a 5-mile radius, aquatic species within 10-mile radius, and terrestrial species within a 3-mile radius.

For information on threatened and endangered species and the potential impacts of the draft RLMP, see Volume I, Section 3.7.

2.2.5.1 Plants

Reviews of the TVA Natural Heritage database indicated within the Wilson Reservoir counties, there are two federally listed endangered plant species and two federally listed threatened plant species (see Table 2-8). Of these species none are known to occur within 5 miles of Wilson Reservoir. There are 29 state-listed plant species within the Wilson Reservoir counties, of which seven exist within 5 miles of the reservoir, however only Dutchman's breeches has been recorded on TVA-owned parcels. These species and their habitat requirements are discussed in Table 2-9.

In addition to the listed species, three records of Alabama champion trees, the American yellowwood, paper mulberry, and September elm are located within the same parcel allocated to Zone 2 (Project Operations) as the Dutchman's breeches. However, Dutchman's breeches have not been recorded in this locality since 1978.

For information on plant communities and potential impacts of the draft RLMP, see Volume I, Section 3.5.3.

Table 2-9. Habitat Requirements for Plant Species of Conservation Concern within 5 Miles of Wilson Reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
Allegheny-spurge	Rich woods with limestone substrate[2]	Likely
Blue-eyed Mary	Rich wet-mesic woods[3]	Likely
Climbing bittersweet	Woodlands, bluffs, stream banks, rocky hillsides, thickets, fence rows, roadsides[2]	Likely
Dutchman's breeches	Mesic woodlands, slopes/ravines, ledges along streams[4]	Yes Recorded on a TVA Zone 2 parcel

Common Name	Habitat Requirements	Suitable Habitat Present
False rue-anemone	Moist deciduous forests, floodplains, ravine bottoms, occasionally pastures[1]	Likely
Fleshy-fruit gladecress	Limestone cedar glades, pastures/fields, roadsides. Near limestone glades[1]	Somewhat likely
Lake-cress	Open water of natural lakes, sloughs, ponds, canals, ditches, and swamps[5]	Likely

[1] Source: Flora of North America 1993
[2] Source: Lady Bird Johnson Wildflower Center 2013
[3] Source: TDEC 2014
[4] Source: Hilty 2015
[5] Source: NatureServe 2016

2.2.5.2 Terrestrial Wildlife

Reviews of the TVA Natural Heritage database indicate that there are 4 federally listed terrestrial wildlife species and 22 state-listed species in the Wilson Reservoir counties (see Table 2-8). Within 3 miles of the reservoir, only five federally listed species and an additional four state-listed species have been recorded (Table 2-10). Only one of these species, the gray bat, has been recorded on a TVA parcel. These species and their habitat requirements are described in Table 2-10.

Table 2-10. Habitat Requirements for Terrestrial Species of Conservation Concern within 3 Miles of Wilson Reservoir

Common Name	Habitat Requirements	Suitable Habitat Present
Amphibians		
Hellbender	Creeks and rivers[1]	Likely
Birds		
Bald eagle	Forested areas near open water[1]	Likely
Insects		
A beetle (*Batriasymmodes spelaeus*)	Terrestrial cave obligate[2]	Somewhat likely
Mammals		
Gray bat	Roosts in caves[1] and forages in streams, rivers and reservoirs	Yes Recorded on a TVA Zone 2 parcel
Indiana bat	In winter, hibernacula are found in caves. During summer, roosts are found in wooded or semi wooded areas that have suitable trees with loose bark[1]	Likely
Northern long-eared bat	In winter, hibernacula are found in caves. During summer, roosts are found in wooded or semi wooded areas that have suitable trees with loose bark[1]	Likely

Common Name	Habitat Requirements	Suitable Habitat Present
Rafinesque's big-eared bat	A woodland bat. Hibernation occurs in caves. Summer roosting occurs in hollow trees, buildings, under bridges or in culverts [1]	Likely
Tricolored bat	Winter roosts are in caves or cave like areas. Summer roosts are usually found in dead or live tree foliage, caves, and mines. Occasionally found in man-made structures, or tree cavities. Tolerates open areas[1]	Likely
Reptiles		
Alligator snapping turtle	Slow moving, deep water of rivers, sloughs, oxbows, swamps, and lakes; middle and west Tennessee; obscure [2]	Likely

[1] Source: NatureServe 2016
[2] Source: TDEC 2014

For information on terrestrial wildlife and potential impacts of the draft RLMP, see Volume I, Section 3.5.4.

2.2.5.2.1 Amphibians

There are no records of the hellbender on TVA parcels. Occurrences of hellbender in Wilson Reservoir are unlikely since the implementation of the dams on the Tennessee River; however, there is a potential for tributaries of the reservoir to contain suitable habitat to support this species within Wilson Reservoir watershed.

2.2.5.2.2 Birds

There are no records of bald eagles within TVA parcels, however a bald eagle nest that has been active since 2011 does exist within 660 feet of Parcel 11 (proposed for Zone 2 – Project Operations). Actions within 660 feet of this nest could impact this nest. Additionally, the lake and its tributaries provide suitable habitat for additional nesting and foraging bald eagles as there are many records of sitings along the reservoir and its tributaries.

There is one cave that may provide suitable habitat for the beetle, however none have been recorded in this cave.

2.2.5.2.3 Mammals

One gray bat was caught on a TVA parcel allocated to Zone 2 (Project Operations). There are two caves within 3 miles of the reservoir that are known maternity roosts for large numbers of gray bats. One cave present on a TVA parcel around this reservoir is not a known hibernacula for any bat species. The gray bat capture mentioned above as well as two additional gray bat capture locations on the adjacent Muscle Shoals Reservation Redevelopment document the use of streams and wetlands on these parcels by foraging gray bats. Tricolored bats, Rafinesque, Indiana and northern long-eared bats use caves to roost in winter and use forested habitat for foraging and roost in summer. A radio tagged Indiana bat was tracked to the Muscle Shoals Reservation Redevelopment area in the spring of 2016. However the location of the roost tree could not be determined because the transmitter used the track the bat fell off the bat before the roost tree was located. Acoustic detectors subsequently operated by TVA staff near the presumed roosting area for several days did not record any Indiana bat (or northern long-eared bat) calls. Due to the high proportion of forested cover it is likely that these state and federally listed bat species may use the TVA parcels during some portion of their life.

2.2.5.2.4 Reptiles

There are records of alligator snapping turtles both above and below the reservoir dam. There have been no new records since 1983, however suitable habitat may still be present.

2.2.5.3 Aquatic Species

In the Wilson Reservoir counties, there are 38 federally listed aquatic animal species, 33 of which are listed as endangered. There are 112 state-listed species (see Table 2-8). Within 10 miles of the reservoir, there are 34 federally listed species and 67 state-listed species (Table 2-11). There are no records of any listed species on TVA parcels, however there are records of 13 listed species within the reservoir. Both the boulder darter and the turgid blossom pearlymussel are federally listed as endangered, however both are presumed to be extirpated. The remaining 10 species are state-listed and only the purple illiput mussel has been recorded recently within the reservoir. The three state-listed caddisflies may be present due to the abundance of small streams and tributaries, however none have been collected since 1990.

Table 2-11. Habitat Requirements for Aquatic Species of Conservation Concern within 10 Miles of Wilson Reservoir

Common Name	Habitat Requirement	Suitable Habitat Present
Insects		
A caddisfly (*Hydropsyche rotosa*)	Streams[1]	Likely
A caddisfly (*Rhyacophila fenestra*)	Streams[1]	Likely
A caddisfly (*Chimarra socia*)	Streams[1]	Likely
Fish		
Alabama cavefish	Subterranean water in caves[1]	Unlikely
Bigeye chub	Small to medium tributaries with gravel substrate. Does not tolerate siltation[1]	Likely
Blotched chub	Shallow water of medium streams to small rivers with gravel, rubble, or bedrock substrate[1]	Somewhat likely
Blotchside logperch	Riffles and gravel runs of clear, small to medium rivers[1]	Somewhat likely
Boulder darter[3]	Riffles of small to medium rivers[1]	Historic record
Crown darter	Rocky pools and adjacent riffles of headwaters, creeks, and small rivers[2]	Unlikely
Fantail darter	Riffles with gravel/rubble in creeks to medium rivers[1]	Somewhat likely
Flame chub	Springs and spring fed streams[1]	Unlikely
Gilt darter	Small-medium rivers with clean water and strong flow[1]	Somewhat likely
Greenside darter	Medium to large creeks and small to medium rivers. Riffles with gravel substrate, bedrock pools, quiet lakeshores[1]	Likely
Lollipop darter	Small to medium sized, gravelly, cool, spring-fed streams; Shoal Creek watershed[2]	Likely
Mountain brook lamprey	Clean high gradient creeks, Runs and riffles[1]	Somewhat likely
Northern studfish	Margins, pools, backwaters of creeks and small to medium rivers[1]	Likely
Redline darter	Riffles of clear creeks and small to medium rivers[1]	Somewhat likely
Rosyface shiner *Notropis micropteryx*	Large creeks and small rivers with gravel and rubble. Sometimes in lakes near creeks[1]	Likely
Rosyface shiner *Notropis rubellus*	Swift large creeks and small rivers with clean gravel and rubble[1]	Likely
Sawfin shiner	Warm clear flowing pools, backwaters, gentle runs of creeks[1]	Somewhat likely
Slackwater darter	Gravel bottomed pools in slow areas of creeks and small rivers[1]	Likely
Slender madtom	Riffles, rocky pools[1]	Likely
Southern cavefish	Aquatic cave obligate; cave	Unlikely, cave on TVA parcel

Common Name	Habitat Requirement	Suitable Habitat Present
	streams, karst waters, and water supply wells; reported from all karst regions excluding Valley and Ridge and Blue Ridge[2]	
Southern redbelly dace	Headwaters and upland creeks[1]	Unlikely
Spotfin chub	Large creeks in upland and montane areas[1]	Unlikely
Stargazing minnow	Creeks and small to medium rivers in rocky/gravel runs and riffles. Requires warm clear water[1]	Likely
Stonecat	Runs, riffles, rapids in creeks and rivers[1]	Likely
Streamline chub	Small to large rivers, clear water with gravel bottoms[1]	Likely
Tuscumbia darter	Ponded spring-fed habitats of valley floor springs; lower Tennessee River; probably extirpated from Tennessee[2]	Unlikely
Gastropods		
Anthony's river snail	Cobble rubble substrate of large rivers[1]	Likely
Armored rocksnail	Partially buried logs, gravel, and preferably submerged rock outcrops; lower Cumberland River and larger tributaries; Obey River[2]	Unlikely
Corpulent hornsnail	Extremely limited distribution in Tennessee River from Battle Creek at Ketchall (Kimball), Marion County, Tennessee, downstream[2]	Somewhat likely
Muddy rocksnail[3]	Formerly occurred in portions of lower Cumberland and lower Tennessee systems; may be limited to dam tailwaters currently	Historic record
Ornate rocksnail	Large rivers, does not readily adapt to reservoirs[1]	Unlikely
Rugged hornsnail[3]	Flowing water on gravel/cobble/boulder substrate. Small-large rivers[1]	Historic record
Shortspire hornsnail	Freshwater[1]	Somewhat likely
Spiral hornsnail	Creeks, medium rivers. Endemic to tributaries of the Tennessee River in northern Alabama[1]	Likely
Telescope hornsnail	Tennessee river and major tributaries[1]	Likely
Varicose rocksnail	Rocky shoals and riffles in shallow water of medium to large rivers[1]	Likely
Warty rocksnail	Rocky substrates in riffle systems; Elk River and larger tributaries (Tennessee River watershed)[2]	Unlikely

Common Name	Habitat Requirement	Suitable Habitat Present
Mussels		
Acornshell	Medium to large rivers in riffle beds[1]	Likely
Alabama lampmussel	Shoals of small to medium streams[1]	Somewhat likely
Angled riffleshell	Shallow fast moving water in medium to large rivers[1]	Likely
Birdwing pearlymussel	Small to medium rivers in riffles with sand/gravel substrate and moderate to fast current[1]	Likely
Black sandshell[3]	Medium-large rivers in areas with strong currents over rocky substrates[1]	Historic record, likely
Butterfly[3]	Large rivers. Adapts to impoundments[1]	Historic record, likely
Clubshell	Small/med-sized rivers and streams; deeply buried in sand/fine gravel or in clean, coarse sand/gravel runs; lower Cumberland and Tennessee rivers[2]	Likely
Cracking pearlymussel	Creeks to large rivers. In fast currents it is found in sand/grave/cobble substrate. In slow current, mud/sand substrates[1]	Likely
Cumberland leafshell	Medium to large rivers[1]	Likely
Cumberland moccasinshell[3]	Small streams and headwaters in sand/gravel substrate[1]	Historic record, likely
Cumberland monkeyface	Riffle and shoal areas of headwater streams and bid rivers. Requires clean fast flowing water[1]	Unlikely
Cumberlandian combshell	Shallow water of large creeks to large rivers[1]	Likely
Deertoe	Medium rivers and lakes[1]	Likely
Dromedary pearlymussel	Riffles at sand and gravel shoals of moderate current rivers. In Tennessee, it is also found in deeper slower moving water[1]	Likely
Elktoe[3]	Typical in small streams in riffles with swift currents and sand or gravel substrate[1]	Historic record, likely
Fanshell	Medium to large streams, sometimes found in rivers with gravel substrate and strong current[1]	Somewhat likely
Fine-rayed pigtoe	High gradient clear streams with firm cobble/gravel substrate[1]	Unlikely
Fluted kidneyshell	Small-medium rivers in swift currents[1]	Somewhat likely
Hickorynut	Sand/gravel substrate in deep water[1]	Likely
Kidneyshell	Small to medium rivers, sometime sin shallow areas of impoundments with moving water[1]	Likely

Common Name	Habitat Requirement	Suitable Habitat Present
Knob mudalia	Shoal habitat[1]	Somewhat likely
Lilliput	Shallows of lakes, ponds, reservoirs, and rivers[1]	Likely
Long-solid	Medium to large rivers with strong currents[1]	Likely
Monkeyface[3]	Medium to large rivers in gravel/sand substrate[1]	Historic record
Mountain creekshell	Most often encountered in small headwater creeks and streams in gravel and sand substrate[1]	Unlikely
Ohio pigtoe[3]	Medium to large rivers. In reservoirs, usually found in tailwaters[1]	Historic record, likely
Orange-foot pimpleback	Riffles and shoals in medium to large rivers[1]	Likely
Oyster mussel	Sand/Gravel substrates in swift currents of large creeks and rivers. Sometimes associated with *Justica americana* beds[2]	Likely
Painted creekshell	Mixed sand and gravel with good current in less than 3 feet water[1]	Likely
Pheasantshell	Shallow sand/gravel riffles with fast currents[1]	Likely
Pink mucket	Large river species associated with swift currents. May be able to reproduce in impoundments with flowing water[1]	Likely
Pocketbook[3]	Generalized habitat, adapts to both deep impoundments and shallow rivers[1]	Historic record, likely
Purple catspaw	Medium-large rivers, in sand and gravel substrates in runs and riffles; Tennessee and Cumberland river systems[2]	Likely
Purple lilliput[3]	Small-medium sized rivers and large creeks, in mud, sand, and gravel substrates; Tennessee and Cumberland river systems in headwater areas[2]	1998 record, likely
Pyramid pigtoe	Rivers with strong current and firm sand/gravel substrates; Tennessee and Cumberland river systems including KY Reservoir[2]	Likely
Rayed bean	Riffles of medium-small rivers and creeks, in gravel and sand substrates associated with *Justicia americana*; Tennessee River watershed[2]	Somewhat likely
Ring pink	Gravel and sandbars of large rivers[1]	Likely
Rock pocketbook	Mud and sand bottom pools in medium-large rivers in standing or	Likely

Common Name	Habitat Requirement	Suitable Habitat Present
	slow flowing water[1]	
Rough pigtoe	Rivers with strong current and firm sand/gravel substrates; Tennessee and Cumberland river systems including KY Reservoir; W Uplands and W Highland Rim[2]	Likely
Round combshell	Riverine, presumed extinct[1]	Unlikely
Round hickorynut	Medium-large rivers in sand and gravel substrate with moderate flow[2]	Likely
Round pigtoe	Medium to large rivers in sand, gravel, and cobble substrates of shoals; Tennessee and Cumberland river systems[2]	Likely
Round-rib elimia	Springs and spring branches1	Unlikely
Scaleshell	Variety of substrates, restricted to rivers with relatively good water quality[1]	Somewhat likely
Sheepnose	Generally found in deep water mud/sand/gravel bottoms in large rivers with swift currents [1]	Likely
Shiny pigtoe pearlymussel	Shoals and riffles of small to medium rivers. Does not tolerate deep water or reservoirs[1]	Unlikely
Slabside pearlymussel	Large creeks to medium rivers, in riffles/shoals of sand, fine gravel, and cobble substrates with medium current; Tennessee River watershed[2]	Likely
Slowwater elimia	Flowing water[1]	Somewhat likely, little known about suitable habitat
Smooth rabbitsfoot	Small to medium rivers with moderate to swift current[1]	Somewhat likely
Snuffbox	Riffles of medium-large rivers with stony or sandy bottoms, in swift currents, usually deeply buried; Tennessee and Cumberland river systems[2]	Likely
Spectaclecase	In sheltered areas of large rivers.	Likely
Spike	Medium to large rivers in shoals, occasional found in tail waters of dams[1]	Likely
Sugarspoon	Flowing water conditions in a medium river, presumed extinct[1]	Unlikely
Tennessee clubshell	Creeks and rivers in shallow riffles and shoals composed of gravel or sand. Occasionally found in deep water habitat south of Watts Bar Dam[2]	Somewhat likely
Tennessee pigtoe[3]	Riffle sand shoals over rocky substrate in shallow water of creeks and rivers[2]	Historic record, likely

Common Name	Habitat Requirement	Suitable Habitat Present
Tuberculed blossom pearlymussel	Shallow riffles and shoals with sand/gravel substrate in creeks and medium rivers[1]	Likely
Turgid blossom pearlymussel[3]	Clear unpolluted water of fast flowing streams[1]	Historic record
Wavy-rayed lampmussel	Small to medium streams and rivers in riffles over rocky substrate[1]	Somewhat likely
White heelsplitter	Rivers, sloughs, backwaters, lakes, reservoirs[1]	Likely
White wartyback	Presumed to inhabit shoals and riffles in large rivers; Tennessee and Cumberland river systems. Very rare and possibly extirpated in TN[2]	Somewhat likely
Yellow-blossom pearlymussel	Riffle and shoal areas in medium streams[1]	Somewhat likely

[1] Source: NatureServe 2016
[2]: Source: TDEC 2014
* Records within the Reservoir

For information on aquatic species and potential impacts of the draft RLMP, see Volume I, Section 3.6.

2.2.6 Water Quality

Wilson Reservoir is a moderate size reservoir with a relatively short average hydraulic residence time of 6 days but a large mean depth of 41 feet. In the state of Alabama, water use classifications apply water quality criteria adopted for particular uses based on existing utilization, uses reasonably expected in the future, and those uses not now possible because of correctable pollution but which could be made if the effects of pollution were controlled or eliminated. The seven designated uses for interstate and intrastate waters are defined by the Alabama Department of Environmental Management (ADEM), Chapter 335-6-11 and include: Outstanding Alabama Water, Public Water Supply, Swimming and Other Whole Body Water-Contact Sports, Shellfish Harvesting, Fish and Wildlife, Limited Warmwater Fishery, and Agricultural and Industrial Water Supply. Waterbodies in Alabama that do not fully support their designated uses based on a review of water quality data and information are considered to be impaired and included in the 303(d) list. ADEM has added Wilson Reservoir to the draft 2016 303(d) list of impaired water based on nutrients with a source or cause being agriculture non-point sources (ADEM 2016). ADEM's designated uses for Wilson Reservoir include public water supply, swimming, and fish and wildlife.

The most recent ratings for dissolved oxygen, chlorophyll, and sediment for Wilson Reservoir from TVA's Reservoir Ecological Health Ratings program are presented in Table 2-12. Similar to several other reservoirs, dissolved oxygen levels near Wilson Dam have been rated as poor due to low concentrations in deeper water from May through August; DO varies with streamflow, with low concentrations during low flow periods. Chlorophyll has typically rated poor due to high concentrations during summer.

Table 2-12. Ecological Health Indicators at Wilson Reservoir – 2012

Monitoring Location	Dissolved Oxygen	Chlorophyll	Sediment
Forebay	Poor	Poor	Fair

Source: TVA 2016a

Sediment quality typically rates good, although chlordane, a pesticide previously used to control termites and crop pests, was detected in the sediment sample from the forebay in 1998 and 2004, resulting in fair ratings. Sediment quality rated fair because low levels of polychlorinated biphenyls (PCBs) were detected in samples collected at the forebay. No pesticides were detected, and all metals concentrations were within the expected range.

While water supply intakes and waste water discharges are regulated by the states under the National Pollutant Discharge Elimination System, TVA permits the actual intake and outfall structures under Section 26a of the TVA Act. The most recent state permit/water withdrawal registration data for water supply withdrawals and waste water discharges directly from or to the reservoirs is provided in Table 2-13. This information does not include withdrawals or discharges in the watersheds.

Table 2-13. Direct Reservoir Average Daily Water Supply Withdrawals and Wastewater Discharges – 2016

2010 Water Withdrawal Volume (MGD)			2010 Wastewater Discharge Volume (MGD)		
Municipal	Industrial	Thermo-electric	Municipal	Industrial	Thermo-electric
8.95	21.92	0	0	0	0

Source: Pers. Comm., Gary Springston, TVA, August 2016

For information on water quality and potential impacts of the draft RLMP, see Volume I, Section 3.8.

2.2.7 Wetlands

Wetlands are transitional ecosystems between terrestrial and aquatic communities, where saturation with water is the dominant factor in determining the types of plants and animals present. Wetlands are ecologically important because of their beneficial effect on water quality, their moderation of flow regimes by retaining and gradually releasing water, their value as wildlife habitat, and as areas of botanical diversity. Wetlands exist within and adjacent to TVA reservoirs and are influenced by surface water and groundwater connections to the water levels in these reservoirs. The presence of wetlands immediately on or adjacent to TVA reservoirs is related to the land use characteristics and development status of the shoreline. Lands supporting more intense shoreline development are typically noted as having a decrease in wetland features.

Emergent wetlands typically occur in a narrow elevation zone centered on the summer pool elevation and contain water for much of the growing season. Vegetation typically includes cattail, bulrush, arrowhead, and water plantain. Scrub-shrub wetlands are typically associated with reservoir shorelines and coves and are often transition zones between emergent and forested wetlands. The vegetation can include hardwood trees less than 15 feet tall, but are dominated by shrubs such as silky dogwood, red osier dogwood, buttonbush, alder, willow, and elderberry. Forested wetlands occur on lower-lying, undisturbed areas and along tributary streams on power generation sites. These areas are dominated by flood tolerant hardwood species such as oaks, maples, and ash.

Vegetated wetlands occur with greater frequency and size along the mainstem reservoirs and tailwaters, such as Wilson, than along the tributary reservoirs and tailwaters. This is due in part to the larger-sized watersheds of mainstem reservoirs resulting in a greater volume of water; greater predictability of the annual hydrologic regime; shoreline and drawdown zone topography (wider and flatter floodplains, riparian zones, and drawdown zones and large areas of shallow water); and larger sections of relatively still, shallow-water areas. Wetlands tend to be smaller and do not occur as frequently on tributary reservoirs because of the relatively steep drawdown zones, the rolling to steep topography of adjacent lands, shoreline disturbance caused by wave action, and the lower predictability and shorter duration of summer pool levels. Within mainstem reservoirs, wetlands occur on flats between summer and winter pool elevations, on islands, along reservoir shorelines, in dewatering areas, in floodplains, on river terraces, along connecting rivers and streams, around springs and seeps, in natural depressions, in areas

dammed by beaver, in and around constructed reservoirs and ponds (diked and/or excavated), and in additional areas that are isolated from other surface waters.

The information presented in this document is derived from the National Wetland Inventory database and supplemented with previous on-the-ground surveys done by TVA, including for the SMI EIS. Field surveys were not performed for this RLMP to gather more up-to-date information regarding the types and locations of wetlands within the Wilson Reservoir. The only types of non-open water wetlands mapped within the Wilson Reservoir are forested and emergent (Table 2-14).

Table 2-14. Wetland Types within the Wilson Reservoir

Wetland Type	Acres
Emergent	7.9
Open Water	19.1
Forested	32.5
Total	**59.5**

Source: USFWS 2016b

Some of the wetland areas within the reservoir are present in local, state, and federally managed areas—including wildlife refuges, wildlife management areas, national forests, parks, and recreation areas—and TVA-designated sites, including small wild areas, habitat protection areas, and ecological study areas (see Section 2.2.11).

For information on wetlands and the potential impacts of the draft RLMP, see Volume I, Section 3.9.

2.2.8 Floodplains

The area encompassed by the RLMP extends from the lower limit of TVA's property, just below the Wilson Dam at approximate Tennessee River Mile (TRM) 256.72, upstream to about TRM 274.9 at Wheeler Dam. Wilson Dam is located at TRM 259.4. The 100-year floodplain is the area that would be inundated by the 100-year flood (base flood).

In Wilson Reservoir, the 100-year flood elevations for the Tennessee River vary from 508.0 feet msl at the Wilson Dam at TRM 259.4 to elevation 510.6 feet msl at TRM 274.9 just below Wheeler Dam. The 500-year flood elevations vary from 508.0 feet msl at TRM 259.4 to 511.2 feet msl at TRM 274.9. Tabulations of the 100- and 500-year flood elevations are included

in Volume I, Appendix D. For information on the potential impacts of the draft RLMP on floodplains, see Volume I, Section 3.10.

2.2.9 Air Quality

In accordance with the Clean Air Act Amendments of 1990, all counties that include parts of the Wilson Reservoir are designated with respect to compliance, or degree of noncompliance, with the National Ambient Air Quality Standards (NAAQS). The NAAQS have been established to protect the public health and welfare with respect to six pollutants: particulate matter, sulfur dioxide, carbon monoxide, ozone, nitrogen dioxide, and lead. An area with air quality better than the NAAQS is designated as “attainment;” while an area with air quality worse than the NAAQS is designated as “non-attainment.” Colbert and Lauderdale counties in Alabama are considered in attainment for all NAAQS. No wilderness areas or parks designated Prevention of Significant Deterioration Class I air quality area occur near the Wilson Reservoir. General information about air emissions and climate change are identified in Volume I.

Sources of air emissions within TVA lands along the Wilson Reservoir occur at the dam and Muscle Shoals Reservation facilities, navigation locks and from truck and vehicle transportation. Within Wilson Reservoir, lands that would be allocated to Zone 2 (Project Operations) have the greatest potential to support uses that produce higher levels of air emissions.

Air emissions generated at Wilson Reservoir varies with type of activity/development. Currently, air emissions from uses on TVA lands on the Wilson Reservoir are low. Future projects that have the potential to affect ambient air quality would be planned in detail to minimize air emission impacts and would comply with Clean Air Act regulations.

For information on air quality and the potential impacts of the draft RLMP, see Volume I, Section 3.11.

2.2.10 Cultural and Historic Resources

Cultural resources include prehistoric and historic archaeological sites, districts, buildings, structures, and objects, as well as locations of important historic events that lack material evidence of those events. Cultural resources that are listed, or considered eligible for listing, on the National Register of Historic Places (NRHP) are called historic properties. To be considered an historic property, a cultural resource must possess both integrity and significance. A historic property’s integrity is based on its location, design, setting, materials, workmanship, feeling, and

association. The significance is established when historic properties meet at least one of the following criteria: (a) are associated with important historical events or are associated with the lives of significant historic persons; (b) embody distinctive characteristics of a type, period, or method of construction; (c) represent the work of a master, or have high artistic value; or (d) have yielded or may yield information important in history or prehistory (36 CFR Part 60.4).

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to consider the effects of their proposed undertakings on historic properties and provide the Advisory Council on Historic Preservation an opportunity to comment on those effects. TVA determined that the draft RLMP (Alternative B of the EIS) is an “undertaking” as defined by the regulations under NHPA. Once an action is determined to be an undertaking, the regulations require agencies to consider whether the proposed activity has the potential to impact historic properties. If the undertaking is such an activity, then the agency must follow the following steps: (1) involve the appropriate consulting parties; (2) define the area of potential effects (APE); (3) identify historic properties in the area of potential effects (APE); (4) evaluate possible effects of the undertaking on historic properties in the APE; and (5) resolve adverse effects. (36 CFR § 800.4 through 800.13). An APE is defined as the “geographic area or areas within which the undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. (36 CFR § 800.16.). Concerning cultural resources, the APE is taken as the affected environment for purposes of this EIS.

Section 106 of the NHPA requires federal agencies to consult with the respective State Historic Preservation Officer and Indian tribes when proposed federal actions could affect historic and cultural resources, including archaeological resources, which are also protected under the Archaeological Resources Protection Act, and the Native American Graves Protection and Repatriation Act, in addition to the NHPA.

2.2.10.1 Archaeological Resources

The Wilson Reservoir region has been an area of human occupation for the last 12,000 years. This includes five broad cultural periods: Paleo-Indian (>12,000-8,000 BC), Archaic (8000-1600 BC), Woodland (1600 BC-AD 1000), Mississippian (AD 1000-1700), and Historic (AD 1700-present). These divisions are based on stylistic changes in artifact types and technological and cultural adaptations. Prehistoric land use and settlement patterns vary during each period, but short- and long-term habitation sites are generally located on flood plains and alluvial terraces along rivers and tributaries. Specialized campsites tend to be located on older alluvial

terraces and in the uplands. During the later Protohistoric/Historic period (sixteenth century) the area contained a small number of aboriginal settlements. The Chickasaws granted a parcel at the mouth of Bear Creek, the western boundary of present-day Colbert County, for a trading post in 1786. When the Mississippi Territory was organized in 1798, the need for a road to the area from the east was recognized, and the Natchez Trace, an Indian trail that crossed the Tennessee River west of the shoals, was expanded to a wagon road in 1802. The road increased the traffic of whites in the area. Continued pressure on American Indian tribes to cede their land east of the Mississippi resulted in the gradual loss of their territory through illegal treaties. The influx of European settlers into the region forced cession of Cherokee and Chickasaw lands in the Treaty of 1816. The Tennessee River served as a primary travel route in the region and Tuscumbia, the seat of Colbert County, became one of the agricultural and commercial centers of northern Alabama. The creation of the Tuscumbia Railway Company solidified Tuscumbia's role as a major commercial center. The First World War brought another role to the area, that of the country's leading ammunitions manufacture with the construction of two nitrate plants (U.S. Nitrate Plant No. 1 and 2) and a massive hydroelectric dam (Wilson Dam) to provide power to the facilities. Wilson was operated and managed by the United States Corps of Engineers until 1933 when ownership was transferred over to the TVA.

No archaeological surveys were conducted at Wilson prior to inundation. A systematic archaeological survey has been conducted for the majority (80 percent) of Wilson Reservoir fee-owned land in association with the survey of the Muscle Shoals Reservation (Pietak et al., 2002). The survey identified 30 archaeological sites that ranged from prehistoric habitations, Civil War earthworks and sites associated with the construction of Wilson Dam and the Nitrate Plant. Many of these sites have been determined eligible for the NRHP and the sites were previously recommended as contributing elements to the proposed Muscle Shoals Historic District.

2.2.10.2 Historic Structures

Several properties of historic value are located on Wilson Reservoir property. These include the Wilson Dam, which has been designated a National Historic Landmark, and the TVA Lock Operations Building. Several structures associated with the Civilian Conservation Corps (CCC) including the NRHP eligible CCC Pavilion and structures associated with the early development of TVA, including the TVA Animal House, are also located on Wilson Reservoir property. The presence of historic structures on Wilson Reservoir cannot be ruled out until a historic structure

inventory has been conducted as part of a project-specific environmental review (all projects that would occur on TVA land receive such a review as part of the NEPA and Section 106 processes). However, the majority of the eligible structures associated with the early development of TVA and the U.S. Nitrate Plant are located outside the zoned parcels but within the visual line of site that may be indirectly impacted by activities on TVA land.

2.2.11 Natural Areas and Ecologically Significant Sites

Natural areas include managed areas, ecologically significant sites, and Nationwide Rivers Inventory (NRI) streams. Managed areas include lands held in public ownership that are managed by an entity (e.g., TVA, State of Alabama, Colbert County) to protect and maintain certain ecological and/or recreational features. A management plan or similar document defines what types of activities are compatible with the intended use of the managed area. Ecologically significant sites are tracts of privately owned land either that are recognized by resource biologists as having significant environmental resources or identified tracts on TVA lands that are ecologically significant, but not specifically managed by TVA's Natural Areas Program. NRI streams are free-flowing segments of rivers recognized by the U.S. National Park Service (USNPS) as possessing outstandingly remarkable natural or cultural values that may potentially qualify them as part of the National Wild and Scenic Rivers System.

The TVA Natural Heritage database indicates that there are four natural areas on or within TVA parcels along Wilson Reservoir; one of which is managed by the TVA Natural Areas Program. An additional five natural areas lie within 3 miles of Wilson Reservoir. The natural areas along Wilson Reservoir include Tennessee Wildlife Resource Agency lands and local parks. For more information on managed areas and sensitive ecological sites, see Volume I, Section 3.13 and Appendix D.

2.2.12 Aesthetics and Visual Resources

The overall visual character of the Wilson Reservoir is predominantly park-like. It contains a mix of wooded and open greenspace which provides welcome respite to the citizens of Muscle Shoals, Florence, and Sheffield. The visual and recreational opportunities the reservoir provides are unique to the Muscle Shoals area because of their convenience, accessibility, and park-like character. Visual buffers are essential to preserving the visual characteristics of the reservoir.

2.2.13 Noise

Sources of noise within lands along the Wilson Reservoir include those associated with developed recreation sites and uses related to TVA project operations and various public works projects. Characteristics of noise emissions associated with common land uses are identified in Volume I of the EIS.

Lands that TVA proposes to allocate to Zone 5 (Industrial) have the greatest potential to support uses that produce high levels of noise. The most common measurement of sound and environmental noise is the A-weighted decibel scale (dBA). This is a logarithmic scale that ranges from 0 dBA to about 140 dBA and approximates the range of human hearing. Common sources of noise from industrial uses include: heavy trucks; rail and barge operations; and industrial workplaces. Noise emission levels for these sources can range from 85 dBA) to 100 dBA (U.S. Department of the Interior [USDOI] 2008) and are dependent on the distance from the noise source. Lands that TVA would be allocated to Zone 2 (Project Operations) and Zone 6 (Developed Recreation) also have the potential to generate noise, but typically to a lesser degree than industrial development. The primary source of noise from land that would be allocated to Zone 2 are the Wilson Dam and Muscle Shoals Reservation, navigation locks and associated barge operations, access roads, boat ramps, and parking areas. Noise emission levels for these sources can range from 70 dBA to 90 dBA (USDOI 2008) and are dependent on the distance from the noise source. The primary source of noise from land that would be allocated to Zone 6 would be commercial marinas and motorized watercraft (motor boats, jet skis), and road traffic. Noise emission levels for land uses that would be allocated to this zone can range from 40 dBA (very quiet) to 90 dBA (jet ski). Noise levels for motor boats and jet skis may also exhibit short elevated bursts of noise as a result of speed of the watercraft and other operational factors.

Approximately 99.8 percent of land along the reservoir would be allocated to zones that would support land uses with the potential for noise emissions (Zones 2 and 6). TVA land that would be allocated to Zone 7 (Shoreline Access) accounts for only 0.2 percent of land uses at Wilson Reservoir. This land use generally does not create noise emissions that would have an effect on the ambient noise environment and reflects a general environment consisting of low noise levels.

Noise from land uses varies with the type of development and will attenuate with distance from the source and as such, the noise level around the reservoir is relatively low. However, because

approximately 99 percent of the TVA-managed land would either be allocated to Zones 2 or 6, the noise level could be marginally higher in certain locations depending on the type and location of the development. Any future projects on parcels that have the potential to affect noise emissions would be planned in detail and may be expected to consist of both water-dependent facilities and other common actions as well as new developments as allowed per each land use zone.

For information on noise and the potential impacts of the draft RLMP, see Volume I, Section 3.15.

2.2.14 Socioeconomics and Environmental Justice

2.2.14.1 Population and Economy

The population of the Wilson Reservoir area, which is comprised of two counties, is described in Table 2-15. Lauderdale County has the largest population with 92,596; however from 2010 to 2015, the total population within the county decreased by 0.1 percent. Colbert County has a population of 54,354 and its population also declined by 0.1 percent over the same time period. Both of the area counties are projected to experience minor (less than one percent) declines in population from 2015 to 2020 while the population of the state of Alabama is expected to increase by 2 percent. Both of the area counties have a higher percent rural population than the state of Alabama at 49.3 and 43.9 percent, respectively.

Table 2-15. Population and Percent Growth – Wilson Reservoir

Population	County		State
	Lauderdale	Colbert	Alabama
Population (2020 - Projection)	92,221	54,021	4,958,548
Population (2015 – Estimate)	92,596	54,354	4,858,979
Population (2014 - Estimate)	92,780	54,491	4,817,678
Population (2010)	92,709	54,428	4,779,736
Projected Growth (2015-2020)	-0.4%	-0.6%	2.0%
Percent Change (2010-2015)	-0.1%	-0.1%	1.6%
Percent Change (2010-2014)	0.1%	0.1%	0.8%
Percent Rural (2010)	49.3%	43.9%	41.0%

Sources: U.S. Census Bureau (USCB) 2010a and USCB 2015

As presented in Table 2-16, from 2010 to 2014, an average of 4.8 percent of the population within the Wilson Reservoir area was unemployed. The state of Alabama during that same time period had an unemployment rate of 6 percent. Management, Business Science, and Arts was

the largest employment sector among all counties within the area. At $43,511, the state of Alabama has a higher median household income than both Lauderdale County at $42,703 and Colbert County at $39,914.

Table 2-16. Employment and Income, 2010-2014 – Wilson Reservoir

Employment and Income	County		State
	Lauderdale	Colbert	Alabama
Civilian Employed Population 16 Years and Over	40,047	21,271	2,010,453
Management and Business Science and Arts	29.9%	27%	33%
Service Occupations	19.5%	15%	17%
Sales and Office	24.7%	26%	24%
Natural Resources, Construction, and Maintenance	11.2%	11%	10%
Production, Transportation and Material Moving	14.7%	21%	16%
Percent of Population > 16 years Unemployed	4.6%	5%	6%
Median Household Income	$42,703	$39,914	$43,511

Source: USCB 2010b

2.2.14.2 Environmental Justice

Executive Order 12898, “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” formally requires federal agencies to incorporate Environmental Justice as part of NEPA. Specifically, it directs them to address, as appropriate, any disproportionately high and adverse human health or environmental effects of their actions, programs, or policies on minority and low-income. Although TVA is not one of the agencies subject to this order, TVA routinely considers Environmental Justice impacts as part of the project decision-making process.

The minority population within the Wilson Reservoir area ranges from 15.0 percent in Lauderdale County to 21.4 percent in Colbert County; both of which are lower than the 33.7 percent minority population in the state of Alabama (Table 2-17). The percent of the population below the poverty level for 2010 to 2014 was relatively similar for both counties and the state. Colbert County has the lowest poverty rate of 18.3 percent while Lauderdale County has the highest with 18.7 percent. Comparatively, the state of Alabama has an 18.9 percent poverty rate.

Table 2-17. Minority Population and Poverty, 2010-2014 – Wilson Reservoir

Minority Population and Poverty	County		State
	Lauderdale	Colbert	Alabama
Total Population	92,780	54,491	4,817,678
White Alone[1]	80,695	43,356	3,327,891
Black or African American Alone[1]	9,228	8,712	1,269,808
American Indian and Alaska Native Alone[1]	436	360	25,181
Asian Alone[1]	743	190	58,322
Native Hawaiian and Other Pacific Islander Alone[1]	194	38	1,430
Two or More Races	1,433	1,091	76,428
Hispanic or Latino[2]	2,174	1,276	191,838
Percent Minority	15.0%	21.4%	33.7%
Percent of Population Below Poverty Level	18.7%	18.3%	18.9%

[1] Includes persons reporting only one race
[2] Hispanics may be of any race, so also are included in applicable race categories.

Source: USCB 2010b

For information on socioeconomics and the potential impacts of the draft RLMP, see Volume I, Section 3.16.

2.3 Major Features of Muscle Shoals and Wilson Dam Reservation and Wilson Reservoir

2.3.1 Muscle Shoals National Recreational Trail

The Muscle Shoals National Recreational Trail (Reservation Road Trail) and an associated trail complex border Reservation Road (Figure 2-1). The Reservation Road Trail Complex, designated as a National Recreation Trail by the Secretary of the Department of the Interior, includes a total of approximately 15 miles of trails. Major elements of the complex include an 8-mile long paved trail, designed to accommodate walking, jogging, and bicycling, and approximately 7 miles of unpaved foot trails. Unpaved foot trails include the Rockpile Hiking Trail that parallels the Tennessee River (Wilson Dam tailwater), the Southport Historical Trail, the Old First Quarters Small Wild Area (SWA) Trail, and an exercise trail.

Both the Rockpile and Old First Quarters SWA trails were originally built by the CCC in the 1930s. A central parking area and restrooms have been built at the trailhead by TVA to accommodate users of the trail complex. Although the trail complex on the reservation carries the National Recreation Trail designation, its continuing management and maintenance are the responsibility of TVA. It is estimated that the trail complex receives 35,000 visits annually (National Recreation Trails Program 2009).

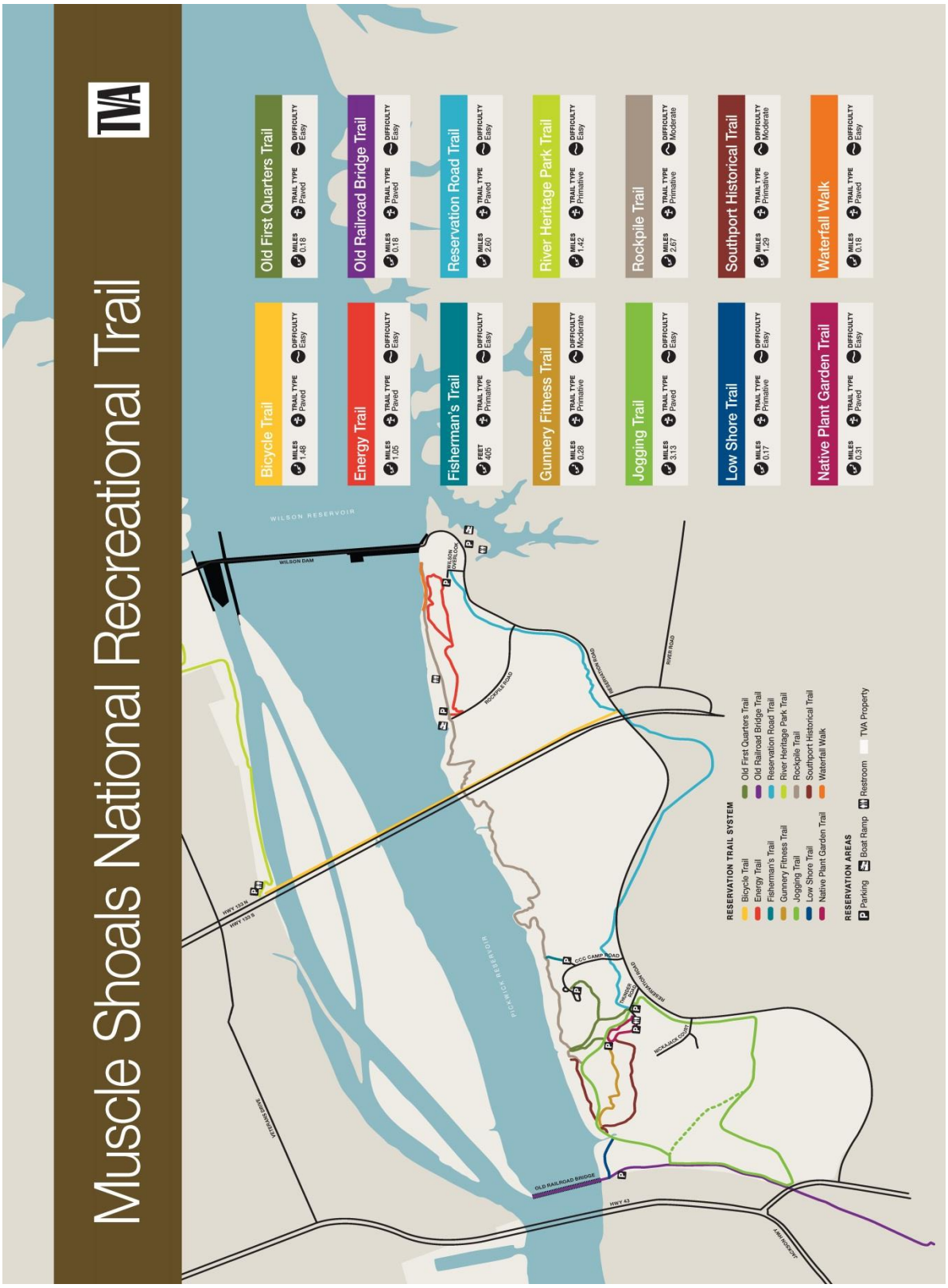


Figure 2-1. Muscle Shoals National Recreation Trail Complex

The Muscle Shoals Trail Complex also connects to a network of off-reservation trails. It connects and enhances the City of Sheffield's Rails to Trails project on the south side of the Tennessee River and the City of Florence's River Heritage Trails on the north side. These trails are linked by a pedestrian/bikeway crossing of the river via the Patton Island Bridge (also known as Singing River Bridge). Combined, these trails make it possible to travel by non-motorized means to and from several locations in the Florence, Muscle Shoals, and Sheffield communities. The importance of the trail system as a recreation resource is likely to increase in the future. Based on public surveys conducted as part of the 2008-2012 Alabama Statewide Comprehensive Outdoor Recreation Plan, walking for pleasure is the most popular outdoor recreation activity among Alabama residents.

The Rockpile Recreation Area provides for overnight camping and day use activities, including bank fishing. A boat launching ramp provides access to the river (Wilson Dam tailwater). There is also a boat launching ramp in Fleet Hollow on the eastern edge of Wilson Dam that provides access to the waters above Wilson Dam.

2.3.2 Tennessee River/Wilson Dam Nonessential Experimental Population

The Tennessee River/Wilson Dam Nonessential Experimental Population is a specific reach (or stream segment) of the Tennessee River extending from the base of Wilson Dam at TRM 259.4 to the backwaters of Pickwick Reservoir at TRM 246. It includes the lower 5 river miles of all tributary streams that enter the Wilson Dam tailwater. This segment of the river, located in both Lauderdale and Colbert counties, has been designated by the USFWS as historical habitat for reintroduction of 16 mussels which are federally listed as endangered, and one aquatic snail which is federally listed as endangered (TVA 2011b).

2.3.3 Wilson Dam Tailwater Restricted Mussel Harvest Area

Wilson Dam Tailwater Restricted Mussel Harvest Area is a section of Pickwick Reservoir that is designated and managed by the Alabama Department of Conservation and Natural Resources Division of Game and Fish. The taking, catching, killing, or any attempt to take, catch, or kill freshwater mussels is prohibited in this area. This restricted area is located in Lauderdale and Colbert counties in Alabama and extends from Wilson Dam downstream to the upper end or head of Seven Mile Island (TVA 2011b).

2.3.4 Trail of Tears National Historic Trail

Trail of Tears National Historic Trail was designated by the USNPS to commemorate the 1838 historic passage of thousands of removed Indians from their homelands in the Southeast to Indian Territory in the West to what is now Oklahoma. Many people perished during this journey. There are land and water components of the trail crossing through north Alabama in Colbert and Lauderdale counties. The water component of the trail is located on Pickwick Reservoir/Tennessee River and adjacent to the TVA reservation. The land component of the trail is located approximately a mile north of Muscle Shoals/Wilson Dam Reservation across Pickwick Reservoir (TVA 2011b).

2.3.5 Old First Quarters Small Wild Area and Potential National Natural Landmark

Old First Quarters SWA and Potential National Natural Landmark (PNNL) is an area with exceptional natural, scenic, and aesthetic qualities featuring a trail for public use that is part of the trail complex located on the reservation north of Reservation Road. This 25 acre SWA and PNNL features spring wildflower displays, foot trails, an intermittent stream, wooden bridges, and scenic bluffs overlooking Pickwick Reservoir, and historic stone stairs and check dams built by the CCC in the 1930s. This area is under consideration by the USNPS for designation as a National Natural Landmark to recognize the national importance of this natural area (TVA 2011b).

2.3.6 Muscle Shoals National Heritage Area

Muscle Shoals National Heritage Area (NHA) includes six counties in northwestern Alabama designated in 2009 as an NHA. This NHA includes Colbert and Lauderdale counties. NHAs are designated by Congress for natural, cultural, historic, and recreational resources and intended to encourage historic preservation and appreciation of the history and heritage of the area. There are currently 49 NHAs throughout the United States. The local coordinating entity for the NHA is the Muscle Shoals Regional Center, located at the University of North Alabama in Florence.

2.3.7 Wildlife Habitat Council Certification

In 1998, TVA established a formal relationship with the Wildlife Habitat Council (WHC), a Maryland-based nonprofit organization that encourages corporations to enhance wildlife habitats on their properties. WHC biologists work with member companies to inventory wildlife populations, identify wildlife enhancement projects, and form teams of employees to administer

them. Wildlife projects vary from site to site, but typically include maintaining wildlife food plots and providing artificial nesting structures for bluebirds, tree swallows, wood ducks, and other species. Native grass and wildflower meadows have also been established at several locations. TVA projects currently certified by the WHC include Colbert Fossil Plant, Raccoon Mountain Pumped Storage Plant, and the Muscle Shoals Reservation.

Certifying sustainably managed forests is another option for forest landowners. Other third-party programs include certification standards for environmental protection and for the conservation of biological values such as species diversity and wildlife habitat. Compliance with standards is determined through third-party verification by independent, accredited auditors. The largest such program in North America is the Sustainable Forestry Initiative. This initiative has enrolled more than 136 million acres of forestland. Certifications to the standards of the Forest Stewardship Council, another major program, have been attained on 20.9 million acres in North America. In recognizing wildlife needs in forest and other program management, third-party certification would ensure that TVA fully considers wildlife objectives and habitat relationships in all forest planning and management activities. Additionally, third-party certification ensures support for old-growth forest protection and vegetation management programs that provide for the full diversity of habitats and species.

2.4 The Future Management of Reservoir Lands

Varying types of land management along with development could occur along Wilson Reservoir. The NRP would be implemented on TVA lands set aside for project operations on an interim basis, as appropriate. With very little TVA land existing along Wilson Reservoir, private property owners making available lands for certain uses would impact the types of developments occurring along the reservoir. Business opportunity, overall economy, local incentives, and community planning practices are factors that impact the types of industry locating or expanding along the reservoir. Recreation demand is driven by population levels, recreation participation rates, changing preferences for different types of recreation, and innovations in recreation equipment. Lands set aside for residential shoreline access are based on the types of property rights conveyed by TVA upon sale of the property and lands managed by other federal, state, or local agencies would most likely continue to do so in a similar manner.

This page intentionally left blank

CHAPTER 3. LAND PLANNING PROCESS

3.1 Process for Planning Land

The reservoir land management planning process involves allocation of reservoir land to seven defined land use zones, six of which are comprised of property owned by TVA in fee. The term "land use zone" refers to a descriptive set of criteria given to distinct areas of land based on location, features, and characteristics. The land use zone definitions listed in Table 3-1 are identical to those listed in the NRP. The definition of a land use zone provides a clear statement of how TVA will manage public land, and allocation of a parcel to a particular land use zone identifies that land for specific uses. Implementation of an RLMP minimizes conflicting land uses and makes it easier to handle requests for use of public land.

This draft RLMP was developed by a team of land managers and technical experts from TVA, knowledgeable about the reservoir and its resources. The planning team proposed land use allocations by integrating public needs, environmental conditions, economic benefits, state and federal policies, and the original congressional intent of the Wilson Reservoir project. The process includes information from resource data, computer analysis, the public, other agencies, and knowledgeable TVA staff. This draft RLMP would be consistent with the strategic direction of the NRP and objectives of the CVLP. Furthermore, the categorization and management of TVA-owned shoreline access land along Wilson Reservoir tiers from the SMI EIS (TVA 1999).

The planning process is completed once TVA conducts an environmental review of the draft RLMP as well as reasonable alternatives, in compliance with the National Environmental Policy Act. This process allows the public and intergovernmental partners to review TVA's proposed allocations and provide input.

Table 3-1. Land Use Zone Definitions

Zone	Definition
Zone 1 Non−TVA Shoreland	Shoreland that TVA does not own in fee. This land may be privately owned or owned by a governmental entity other than TVA. Uses of this non−TVA land may include residential, industrial, commercial, and/or agricultural. In many instances, TVA may have purchased the right to flood and/or limit structures on this non−TVA land (i.e., flowage easement). TVA's permitting authority under Section 26a of the TVA Act applies to construction of structures on non−TVA shoreland. Non−TVA shoreland allocations are based on deeded rights and, therefore, will not change as a result of the lands planning process. This category is provided to assist in comprehensive evaluation of potential environmental impacts of

Zone	Definition
	TVA's allocation decision.
Zone 2 Project Operations	Land currently used, or planned for future use, for TVA operations and public works projects, including: • Land adjacent to established navigation operations — Locks, lock operations and maintenance facilities, and the navigation work boat dock and bases. • Land used for TVA power projects operations — Generation facilities, switchyards, and transmission facilities and rights−of−way. • Dam reservation land — Areas acquired and managed for the primary purpose of supporting the operation and maintenance of TVA dams and associated infrastructure; secondary uses may also include developed and dispersed recreation, maintenance facilities, miscellaneous TVA field offices, research areas, and visitor centers. • Navigation safety harbors/landings — Areas used for tying off commercial barge tows and recreational boats during adverse weather conditions or equipment malfunctions. • Navigation dayboards and beacons — Areas with structures placed on the shoreline to facilitate navigation. • Public works projects — Includes rights−of−way for public utility infrastructure, such as sewer lines, water lines, transmission lines, and major highway projects.
Zone 3 Sensitive Resource Management	Land managed for protection and enhancement of sensitive resources. Sensitive resources, as defined by TVA, include resources protected by state or federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment. Recreational natural resource activities, such as hunting, wildlife observation, and camping on undeveloped sites, may occur in this zone, but the overriding focus is protecting and enhancing the sensitive resource the site supports. Areas included are: • TVA−designated sites with potentially significant archaeological resources. • TVA public land with sites/structures listed in or eligible for listing in the National Register of Historic Places**.** • Wetlands – Aquatic bed, emergent, forested, and scrub−shrub wetlands as defined by TVA. • TVA public land under easement, lease, or license to other agencies/individuals for resource protection purposes. • TVA public land fronting land owned by other agencies/individuals for resource protection purposes. • Habitat protection areas – These TVA natural areas are managed to protect populations of species identified as threatened or endangered by the U.S. Fish and Wildlife Service, state−listed species, and any unusual or exemplary biological communities/geological features. • Ecological study areas – These TVA natural areas are designated as suitable for ecological research and environmental education by a recognized authority or agency. They typically contain plant or animal populations of scientific interest or are of interest to an educational institution that would utilize the area. • Small wild areas – These TVA natural areas are managed by TVA or in cooperation with other public agencies or private conservation organizations to protect exceptional natural, scenic, or aesthetic qualities that can also support dispersed, low−impact types of outdoor

Zone	Definition
	recreation. • River corridor with sensitive resources present – A river corridor is a segment of a river and the adjacent land along the banks. River corridors often consist of a linear green space of TVA land serving as a buffer to tributary rivers entering a reservoir. These areas will be included in Zone 3 when identified sensitive resources are present. • Significant scenic areas – Areas designated for visual protection because of their unique vistas or particularly scenic qualities. • Champion tree site – Areas designated by TVA as sites that contain the largest known individual tree of its species in that state. The state forestry agency "Champion Tree Program" designates the tree, while TVA designates the area of the sites for those located on TVA public land. • Other sensitive ecological areas – Examples of these areas include heron rookeries, uncommon plant and animal communities, and unique cave or karst formations.
Zone 4 Natural Resource Conservation	Land managed for the enhancement of natural resources for human use and appreciation. Management of resources is the primary focus of this zone. Appropriate activities in this zone include hunting, timber management to promote forest health, wildlife observation, and camping on undeveloped sites. Areas included are: • TVA public land managed for wildlife or forest management projects. • TVA public land under easement, lease, or license to other agencies for wildlife or forest management purposes. • TVA public land fronting land owned by other agencies for wildlife or forest management purposes. • Dispersed recreation areas maintained for passive, dispersed recreation activities, such as hunting, hiking, bird watching, photography, primitive camping, bank fishing, and picnicking. • Shoreline conservation areas — Narrow riparian strips of vegetation between the water's edge and TVA's back−lying property that are managed for wildlife, water quality, or visual qualities. • Wildlife observation areas — TVA natural areas with unique concentrations of easily observed wildlife that are managed as public wildlife observation areas. • River corridor without known sensitive resources present — A river corridor is a linear green space along both stream banks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. River corridors will be included in Zone 4 unless sensitive resources are known to be present (see Zone 3). • Islands where sensitive resources are not known to be present or that support existing development.
Zone 5 Industrial	Land currently used, or planned for future use, for economic development, including businesses in distribution/processing/assembly and manufacturing. Preference will be given for businesses requiring water access. There are two primary types of uses for TVA land allocated for Industrial: (1) access for water supply or structures associated with navigation such as barge terminals, mooring cells, etc., or (2) land−based development potential. Areas included are: • TVA public land under easement, lease, or license to other agencies/individuals/ entities for industrial purposes.

Zone	Definition
	• TVA public land fronting land owned by other agencies/individuals/entities for industrial purposes. In some cases, TVA land allocated to industrial use would be declared surplus and sold at public auction. Types of development that can occur on this land are: • Industry — Manufacturing, fabrication, and distribution/processing/assembly involving chemical, electronics, metalworking, plastics, telecommunications, transportation, and other industries. Industry does not include retail or service−based businesses. • Industrial access — Access to the waterfront by back−lying property owners across TVA property for water intakes, wastewater discharge, or conveyance of commodities (i.e., pipelines, rail, or road). Barge terminals are associated with industrial access corridors. • Barge terminal sites — Public or private facilities used for the transfer, loading, and unloading of commodities between barges and trucks, trains, storage areas, or industrial plants. • Fleeting areas — Sites used by the towing industry to switch barges between tows or barge terminals that have both offshore and onshore facilities. • Minor commercial landing — A temporary or intermittent activity that takes place without permanent improvements to the property. These sites can be used for transferring pulpwood, sand, gravel, and other natural resource commodities between barges and trucks.
Zone 6 Developed Recreation	Land currently used, or planned for future use, for concentrated, active recreational activities that require capital improvement and maintenance of developed infrastructure, including: • TVA public land developed for recreational purposes, such as campgrounds, day use areas, etc. • TVA public land under easement, lease, or license to other agencies/individuals/entities for developed recreational purposes. • TVA public land fronting land owned by other agencies/individuals/entities for developed recreational purposes. Residential use, long−term accommodations, and/or individually owned units are not permitted on land allocated for developed recreation. Types of development that can occur on this land are: • Public recreation — Recreation amenities developed and owned by a public agency that are open to the public. Public recreation areas may have varying levels of development, ranging from a water access site (e.g., launching ramp) to a marina facility. Facilities at public recreation areas could include playgrounds/play structures, picnic facilities, tennis courts, horseshoe areas, play courts, recreation centers, trails, greenways, natural areas, amphitheaters, food concessions (vending, snack bar), access to water for fishing and boating, swimming areas and swimming pools, launching ramps, courtesy piers, canoe access, marina facilities owned by the public entity, parking, and campgrounds. Cabins or other overnight accommodations (other than campgrounds) are only permitted if the public recreation area is operated by a state or state agency as a component of a state park system.

Zone	Definition
	• Public recreation areas and facilities are typically owned and operated by the federal, state, county, or local government. However, private entities may operate recreation facilities on public recreation land as concessionaires under agreement with the public entity controlling the property. The use of the facilities may be offered free or for a fee. Time−forward, public−private partnerships where facilities are owned by private investors will not be approved on public recreation land. All structures and facilities should be owned by the public entity. • Commercial recreation — Recreation amenities that are provided for a fee to the public intending to produce a profit for the private owner/operator. These primarily water−based facilities typically include marinas and affiliated support facilities such as stores, restaurants, campgrounds, and cabins and lodges. Where applicable, TVA will require appropriate compensation for the commercial use of the property.
Zone 7 Shoreline Access	TVA−owned land where Section 26a applications and other land use approvals for residential shoreline alterations are considered in accordance with TVA's Shoreline Management Policy. Types of development/management that may be permitted on this land are: • Residential water use facilities, e.g., docks, piers, launching ramps/driveways, marine railways, boathouses, enclosed storage space, and nonpotable water intakes. • Shoreline access corridors, e.g., pathways, wooden steps, walkways, or mulched paths that can include portable picnic tables and utility lines. • Shoreline stabilization, e.g., bioengineering, riprap, gabions, and retaining walls. • Shoreline vegetation management.

Prior to proposing parcel allocations, the TVA planning team reviewed the characteristics of each parcel (i.e., location and existing conditions). TVA also reviewed deeds of selected land previously acquired by the U.S. War Department to identify existing shoreline access rights. In addition, the planning team reviewed existing commitments associated with long−term contractual agreements—that is, existing leases and easements. The planning team utilized the recent field studies documented within the Muscle Shoals Reservation Redevelopment EIS (TVA 2011b). During the process, the planning team used the zone definitions listed above to reach consensus on the proposed allocations of the reservoir land.

In developing RLMPs, TVA proposes to allocate lands currently committed to a specific use to a zone compatible with that use unless there is an overriding need to change the use. Some committed land uses are determined by the covenants and provisions of easement agreements. Committed lands include properties where TVA has granted land rights (easements, leases, etc.) for specific uses, properties where TVA has previously identified resources in need of

protection, and Project Operations lands (transmission lines, dam reservations, public infrastructure, etc.).

Approximately 1,238.4 acres (99 percent) of the TVA land surrounding Wilson Reservoir are committed due to existing agreements, TVA operations or other public infrastructure projects. Approximately 7.7 acres (1 percent) of the TVA land surrounding Wilson Reservoir are uncommitted.

3.2 Wilson Reservoir Goals and Objectives

The NRP established long–term land planning goals and objectives. While these goals and objectives were established to guide planning decisions across the Valley, these same goals and objectives can be applied when planning specific reservoirs.

Goal

TVA will strive to continue to balance shoreline development, recreational use, sensitive and natural resource management, industrial use and other land uses in a way that maintains the quality of life and other important values across the region.

Objectives

Apply a systematic method of evaluating and identifying the most suitable uses of TVA public lands using resource data, stakeholder input, suitability and capability analyses, and TVA staff input.

- Identify land use zone allocations to optimize public benefit and balance competing demands for the use of public lands.
- Identify land use zone allocations to support TVA's broad regional resource development mission. TVA reservoir properties are managed to provide multiple public benefits, including recreation, conservation, and economic development.
- Provide a clear process by which TVA will respond to requests for use of TVA public land.
- Comply with federal regulations and executive orders.

- Enhance the protection of significant resources, including threatened and endangered species, cultural resources, wetlands, unique habitats, natural areas, water quality, and the visual character of the reservoir.

- Provide a mechanism that allows local, state, and federal infrastructure projects when the use is compatible with the zone allocation.

3.3 Parcel Allocations

TVA's land planning process (Section 3.1) along with the goals and objectives specific to Wilson Reservoir (Section 3.2) were used to develop this draft RLMP. Through this process, TVA proposes allocations for each reservoir parcel to one of the seven planning zones as indicated in Table 3−2.

Table 3-2. Summary of Proposed Land Use Allocations for Wilson Reservoir Land Management Plan (Alternative B)

Allocation Designation		Number of Parcels	Acres
Zone 2	Project Operations	8	1,072.1
Zone 3	Sensitive Resource Management	0	0
Zone 4	Natural Resource Conservation	0	0
Zone 5	Industrial	0	0
Zone 6	Developed Recreation	5	148.5
Zone 7	Shoreline Access	1	2.8
Total		**14**	**1,223.4**

Figure 3-1 represents the percent of land acreage on Wilson Reservoir that would be allocated to each land use zone under the draft RLMP (Alternative B of the EIS). Most of the TVA-owned land on this reservoir is allocated to Zone 2 (Project Operations). Smaller amounts of land are allocated to Zone 6 (Developed Recreation) and Zone 7 (Shoreline Access). A detailed description of each zone and the identification of the land zoned by each category is presented below.

- Zone 2 (Project Operations). Under the draft RLMP (Alternative B), Zone 2 would encompass all TVA land currently used for TVA operations and public works projects. There would be 1,072.1 acres allocated to Zone 2. The largest parcel allocated as Zone 2 is a 930.8 acre parcel which consists of the Muscle Shoals Reservation and a portion of the Wilson Dam Reservation (Parcel 13). This parcel would be allocated to Zone 2 to

maintain the integrity of various TVA operations occurring on the property including cultural resource management, developed recreation management, dispersed recreation improvements, hydroelectric operations, natural resource management, navigational protection, trails management, and transmission line construction and maintenance. Parcel 1 includes a portion of the Wilson Dam Reservation which is on the NRHP.

- Zone 6 (Developed Recreation). Lands designated for Zone 6 under the draft RLMP are currently used or planned for recreational purposes, such as public boat launching ramps or parks. For example, the majority of Parcel 4 is included in Veteran's Memorial Park which is managed by the City of Florence, Alabama, for public recreation. Approximately 12 percent (148.5 acres) of TVA-owned land around Wilson Reservoir is allocated to Developed Recreation.

- Zone 7 (Shoreline Access). Under the draft RLMP, a very small amount of TVA land on this reservoir would be allocated to Zone 7, which are TVA-owned lands where Section 26a applications and other land use approvals for private shoreline alterations are considered, were previously considered, and/or where the back-lying landowner possesses deeded rights of access, and where the proposed use would not conflict with the interests of the public.

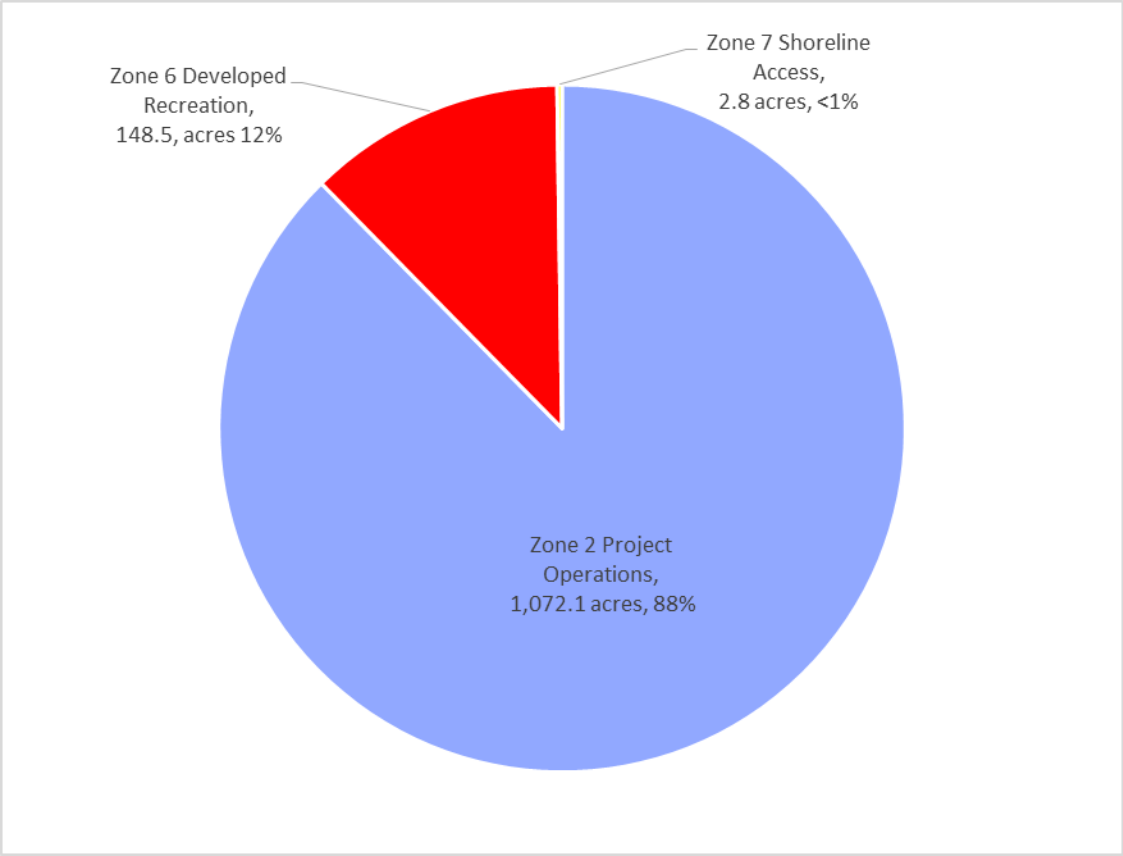


Figure 3-1. Percent of Wilson Reservoir Acreage Proposed by Zone (Alternative B)

These results vary from the estimates for Wilson Reservoir contained in the CVLP, as the previous CVLP did not allocate all of the dam reservation property as Zone 2 (Project Operations) where there were existing land use agreements. In addition, the CVLP anticipated that some parcels of land may be better allocated to different land use zones than those initially identified. As discussed in Volume I of the EIS, TVA proposes to update the target allocations of the CVLP based on the eight draft RLMPs and to recalibrate the CVLP with the periodic updates to the NRP. The preliminary results of the Wilson Reservoir land planning effort were included in the proposed changes to the CVLP. Table 3–3 compares the draft RLMP and the 2011 CVLP estimates for Wilson Reservoir.

Table 3-3. Draft Wilson Reservoir Land Management Plan (Alternative B) and 2011 Comprehensive Valleywide Land Plan Comparison

Allocation Designation		Draft Wilson Reservoir Land Management Plan	2011 Comprehensive Valleywide Land Plan
Zone 2	Project Operations	88%	0%
Zone 3	Sensitive Resource Management	0%	0%
Zone 4	Natural Resource Conservation	0%	7%
Zone 5	Industrial	0%	0%
Zone 6	Developed Recreation	12%	63%
Zone 7	Shoreline Access	<1%	30%

Under the draft RLMP, TVA would allocate most of the property to Zone 2 (Project Operations). A fewer number of acres would be allocated to Zone 4 (Natural Resource Conservation) and Zone 6 (Developed Recreation) than estimated in the 2011 CVLP. These lands were placed into the more appropriate designations, as discussed below:

Zone 2 (Project Operations)

This draft RLMP encompasses the Muscle Shoals and Wilson Dam reservations. There are transmission lines and existing utility easements traversing the reservation in sporadic patterns. The remaining property located on or adjacent to the reservation can either be used to support future upgrades to existing transmission lines, utilized for staging areas for maintenance and upgrades to Wilson Dam, or facilitate navigation in and around Wilson Lock and Fleet Harbor. Therefore, the most appropriate designation for these properties would be Zone 2 (Project Operations).

Zone 4 (Natural Resource Conservation)

The small amount of reservation property included in the 2011 CVLP was allocated to Zone 4 (Natural Resource Conservation). When reviewing the land use of the reservation in its entirety, the more appropriate designation for the property would be Zone 2 (Project Operations) which is consistent with its current use.

Zone 6 (Developed Recreation)

The change in acreage of land allocated to Zone 6 (Developed Recreation) from the 2011 CVLP to this draft RLMP is minor though the percentage in the table above is about 50 percent. The

largest acreage change is the property that is located immediately upstream of the Wilson Lock that is proposed as Zone 2 (Project Operations) in the draft RLMP to maintain the navigational integrity of the approach to the Wilson Lock. However, land-based recreational opportunities would still be considered a secondary use of the property.

Zone 7 (Shoreline Access)

Under the draft RLMP, acres allocated to Zone 7 would decrease slightly. The 2011 CVLP incorrectly identify approximately 3.0 acres as Zone 7 (Shoreline Access).

Of the 1,223.4 acres on Wilson Reservoir, there are no proposed allocation changes to any of the parcels. See Appendix B for Parcel Allocation Description Tables.

3.4 Property Administration

As stewards of public land, TVA uses the RLMP, along with TVA policies and guidelines, to manage resources and to respond to requests for the use of TVA land. All inquiries about or requests for the use of TVA land should be made to the TVA Public Land Information Center at 800-TVA-LAND or 800-882-5263 between 8 a.m. and 6 p.m. Eastern time Monday through Friday.

Pursuant to the TVA Land Policy, TVA would consider changing a land use designation outside of the normal planning process only for the purpose of water access for industrial or commercial recreational operations on privately owned back-lying land or to implement TVA's SMP.

Consistent with the TVA Land Policy, those parcels or portions of parcels that have become fragmented from the reservoir may be declared surplus and sold at public auction. Public works/utility projects, such as easements for pipelines, power or communication wires, roads, or other public infrastructure, proposed on TVA land that would not substantially change the zoned land use or adversely impact sensitive resources would not require an allocation change as long as such projects would be compatible with the use of the allocated zone. Proposed public works/utility projects would be subject to a project-specific environmental review. Any other requests involving a departure from the planned uses would require appropriate approval. Proposals consistent with TVA's policies and the allocated use, and otherwise acceptable to TVA, will be reviewed in accordance with NEPA and must conform to the requirements of other applicable environmental regulations and other legal authorities.

This page intentionally left blank

CHAPTER 4. PARCEL DESCRIPTIONS

This chapter describes the proposed land use determined to be most suitable for each parcel of TVA land as shown on the plan maps (Appendix A, Panels 1-4). The parcel descriptions include the acreage rounded to the nearest tenth and the proposed land use. Relevant data regarding the planned use are provided for each tract and include existing land uses, physical characteristics of the land, presence of existing private water use facilities, and any special considerations related to the future use. All existing private water use facilities with TVA permits are grandfathered, provided they are constructed in accordance with the plans approved by TVA.

Parcel 1 − (42.5 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel includes a portion of the Wilson Dam Reservation. Wilson Dam is on the National Register of Historic Places, and it has been officially recognized by the U.S. government for its historical significance. The dam was designated a National Historic Landmark on November 13, 1966. The largest mass concrete lock and dam of its day in the U.S., it was the first federal hydroelectric project as well as the first U.S. Army Corps of Engineers (USACE) multipurpose effort. TVA acquired possession of the dam when the agency was created in 1933 (TVA 2008).

This parcel also includes the property associated with the navigational locks which are managed by the USACE. To maintain the navigational integrity of the approach to the Wilson Lock, the adjacent property was included in this parcel. A portion of this parcel is under a revocable license to the City of Florence, Alabama, for public recreation, and Veteran's Memorial Park has been developed on the adjacent land (Parcel 4). Although this parcel would not be allocated for Developed Recreation, land-based public recreational opportunities and associated facilities would be considered as a secondary use of this property. No federally or state-listed species are known to occur on this parcel and Veteran's Memorial Park has not been adequately surveyed for cultural resources; this parcel has a moderate probability for the presence of cultural resources (an environmental review would be conducted prior to any ground disturbing activities). Public water use facilities to facilitate safe passage through the Wilson Lock would be considered an appropriate use of the waterfront. However, requests for public recreational and private water use facilities would not be considered.

Table 4−1. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	44–SW
TVA D−Stage Map Numbers	1 and 55
Stream Mile and Bank	TRM 259.4R
Land Use / Land Cover	Maintained lawn, roads, and water control structures
Known Dispersed Recreation Opportunities	Disc Golf, hiking, picnicking, and wildlife observation
Current Agreements/Commitments	• Permanent easement to the State of Alabama for a roadway • Revocable license to the City of Florence, Alabama for Veteran's Memorial Park
Potential Projects	• Potential land-based upgrades to Veteran's Memorial Park • Wildlife Habitat Council projects
Potential Partners	• City of Florence, Alabama • U.S. Army Corps of Engineers

---

Parcel 2 − (41.0 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of the Tennessee River and immediately adjacent to the Wilson Dam reservation. The parcel can be easily accessed by South Cox Creek Parkway and U.S. Highway 133. A permanent easement to the Public Park Authority of the Shoals for a hotel and a term easement to the City of Florence for a hiking trail are encumbrances present on the parcel. The Marriott Shoals Hotel and Spa, Florence Conference Center, River Heritage Park, and associated roads and parking are located on the parcel. Information about the amenities available at River Heritage Park can be found on the City of Florence's Web site, http://www.fpard.com/Parks/index.html. No federally or state-listed species are known to occur on this parcel and this area has been disturbed by development and has a low probability for cultural resources (an environmental review would be conducted prior to any ground disturbing activities). Requests for use of TVA lands to support developed recreation purposes would be considered. Requests for use of TVA lands to support developed recreation purposes would be considered.

Table 4−2. Parcel Information

Location Component	Parcel Specific Information
County, State	Lauderdale, Alabama
TVA D−Stage Map Numbers	1 and 55
Stream Mile and Bank	TRM 259.4R

Parcel 3 − (48.5 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel includes road rights-of-way and the water treatment plant for the City of Florence. Portions of U.S. Highway 133, South Cox Creek Parkway, and South Wilson Dam Road are located on the parcel. No federally or state-listed species are known to occur on this parcel and developed portions of this parcel have a low probability for the presence of cultural resources, but structures within and adjacent to this parcel have not been surveyed or evaluated for their National Register status (an environmental review would be conducted prior to any ground disturbing activities). Requests for private water use facilities would not be considered.

Table 4−3. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	44−SW
TVA D−Stage Map Numbers	1 and 55
Stream Mile and Bank	TRM 259.4R
Land Use / Land Cover	Athletic fields, maintained lawn, roads, and water treatment plant
Known Dispersed Recreation Opportunities	Baseball, soccer, tennis, and wildlife observation
Current Agreements/Commitments	• Permanent easement to the State of Alabama for a roadway • Permanent easements to the City of Florence, Alabama, for water treatment purposes
Potential Projects	None identified
Potential Partners	• City of Florence, Alabama • State of Alabama

---

Parcel 4 − (85.4 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of the Tennessee River and immediately upstream of Wilson Dam. The majority of the parcel is locally known as Veteran's Memorial Park and is encumbered with a permanent easement to the City of Florence for public recreation. Amenities available at Veteran's Memorial Park include lighted tennis courts, softball complex, picnic pavilions, an eighteen-hole disc golf course, youth baseball fields, and a Veteran's memorial. Additional information about the park can be found on the City of Florence's Web site, http://www.fpard.com/Parks/index.html. No federally or state-listed species are known to occur on this parcel and there is a medium probability for the presence of cultural resources; Veteran's Memorial park has not been adequately surveyed for cultural resources. An environmental review would be conducted prior to any ground disturbing activities). Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−4. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	44−SE and 44−SW
TVA D−Stage Map Numbers	1
Stream Mile and Bank	TRMs 259.4−260R

Parcel 5 − (7.7 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel was acquired by the U.S. War Department and is located entirely below the 509.34-foot msl contour. Rights to construct private water use facilities were not reserved by the backlying property owners. This shoreline parcel is located adjacent to the navigational sailing line, and often commercial barge traffic awaits use of the Wilson Dam lock in this area. The sloughs provide a safe haven for personal watercraft awaiting use of the Wilson Dam lock or during adverse weather conditions. No federally or state-listed species are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an

archaeological survey has not been conducted (an environmental review would be conducted prior to any ground disturbing activities). Requests for private water use facilities would not be considered.

Table 4−5. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	44–SE
TVA D−Stage Map Numbers	1 and 2
Stream Mile and Bank	TRMs 260−260.9R
Land Use / Land Cover	Mixed forest and maintained lawn
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 6 − (0.02 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This small parcel is located along the right descending bank of Shoal Creek and encumbered by a permanent easement to the State of Alabama for public recreation. Amenities include a boat ramp along with associated parking on the backlying property. The parcel is located between two commercial recreation operations. No federally or state-listed species are known to occur on this parcel. There is a low probability for the presence of cultural resources. Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−6. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	44–SE
TVA D−Stage Map Numbers	3
Stream Mile and Bank	• Shoal Creek Mile 1.2R • TRM 264.4R

Parcel 7 − (4.9 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the right descending bank of the Tennessee River at mile 265.3 and is locally known at Lock Six boat ramp. The area is encumbered by a revocable license agreement to the City of Killen, Alabama, for public recreation. Amenities include a boat ramp, courtesy pier, and associated parking. No federally or state-listed species are known to occur on this parcel. There is a moderate probability for the presence of cultural resources; however, an archaeological survey has not been conducted (an environmental review would be conducted prior to any ground disturbing activities). Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−7. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	44–SE
TVA D−Stage Map Numbers	5
Stream Mile and Bank	TRM 265.3R

Parcel 8 − (2.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This small parcel is located along the right descending bank of the Tennessee River at 269.3 and is surrounded by private property. The property is not encumbered with a contractual agreement, and could be used as a staging location for maintaining or upgrading navigational aids along the reservoir. No federally or state-listed species are known to occur on this parcel. This parcel has a moderate probability for the presence of cultural resources; however, a cultural resources survey has not been conducted (an environmental review would be conducted prior to any ground disturbing activities). No existing shoreline improvements are currently present, and future requests for private shoreline alterations would not be considered.

Table 4−8. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Lauderdale, Alabama
Topographic Map (Sheet No. and Quadrant)	53–SW
TVA D−Stage Map Numbers	7
Stream Mile and Bank	TRM 269.3R
Land Use / Land Cover	Hardwood forest
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 9 − (17.2 acres)

Proposed RLMP Allocation: Zone 6, Developed Recreation

This parcel is located along the left descending bank of Town Creek at mile 0.9 and is encumbered by a permanent easement to the State of Alabama for public recreation. The land cover is primarily wetlands. No federally or state-listed species are known to occur on this parcel. This parcel has a high probability for the presence of cultural resources, but it has not been surveyed for historic properties (an environmental review would be conducted prior to any ground disturbing activities). Requests for use of TVA lands and associated water-based structures to support developed recreation purposes would be considered.

Table 4−9. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Colbert, Alabama
Topographic Map (Sheet No. and Quadrant)	53–SW
TVA D−Stage Map Numbers	9
Stream Mile and Bank	• Town Creek Mile 0.9L • TRM 2272.2LR

Parcel 10 − (2.8 acres)

Proposed RLMP Allocation: Zone 7, Shoreline Access

This parcel is located along the left descending bank of the Tennessee River at mile 262. Lying entirely below the 509.34−foot msl, the current land use is maintained lawns and wetlands. Wilson Lake Shores subdivision is located on the backlying private property. No federally or state-listed species are known to occur on this parcel. This area has a moderate probability for the presence of cultural resources, but it has not been surveyed for historic properties (an environmental review would be conducted prior to any ground disturbing activities). Water use facilities have been constructed along the shoreline, and future requests for private water use facilities would be considered.

Table 4−10. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Colbert, Alabama
Topographic Map (Sheet No. and Quadrant)	44−SE
TVA D−Stage Map Numbers	2
Stream Mile and Bank	TRM 262L
Land Use / Land Cover	Maintained lawns and wetlands
Structure Profile	509.34−foot mean sea level
Current Agreements/Commitments	Approved water use facilities

Parcel 11 − (5.6 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of two noncontiguous tracts of land located along the left descending bank of the Tennessee River and immediately upstream of Wilson Dam. This parcel provides a visual buffer for the historic Wilson Dam. The property can also be used as a staging area when conducting maintenance operations to the dam or other supporting structures. A bald eagle nest that has been active since 2011 is known within 660 feet of this parcel. This parcel has a moderate probability for the presence of cultural resources, but it has not been surveyed (an environmental review would be conducted prior to any ground disturbing activities). No existing shoreline improvements are currently present, and future requests for private shoreline alterations would not be considered.

Table 4−11. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Colbert, Alabama
Topographic Map (Sheet No. and Quadrant)	44–SE
TVA D−Stage Map Numbers	1
Stream Mile and Bank	TRM 259.4L
Land Use / Land Cover	Hardwood forest
Known Dispersed Recreation Opportunities	Bank fishing and primitive camping
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 12 − (15.3 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists is located along the right descending bank in Fleet Hollow and immediately upstream of Wilson Dam. Transmission lines dissect the parcel, and the shoreline is used as a fleeting area for TVA's Power Service Shop. The property can also be used as a staging area when conducting maintenance operations to the dam or other supporting structures. No federally or state-listed species are known to occur on this parcel. This parcel has a moderate probability for the presence of cultural resources, but it has not been surveyed (an environmental review would be conducted prior to any ground disturbing activities). No existing shoreline improvements are currently present, and future requests for private shoreline alterations would not be considered.

Table 4−12. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Colbert, Alabama
Topographic Map (Sheet No. and Quadrant)	44–SE
TVA D−Stage Map Numbers	1
Stream Mile and Bank	TRM 259.4L
Land Use / Land Cover	Hardwood forest
Known Dispersed Recreation Opportunities	None identified

Location Component and Public Involvement Opportunities	Parcel Specific Information
Current Agreements/Commitments	None identified
Potential Projects	• Placement of TVA property and public lands signs along the parcel boundary and shoreline • Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

Parcel 13 − (930.8 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of the Muscle Shoals Reservation and a portion of the Wilson Dam Reservation. The property stretches from Wilson Dam to the old Southern Railroad Bridge and is bordered by the left descending bank of the Tennessee River and by Reservation Road. Numerous transmission lines are located throughout, and U.S. Highway 133 dissects the parcel.

This parcel was allocated to Zone 2 (Project Operations) to maintain the integrity of various TVA operations occurring on the property. Cultural resource management, developed recreation management, dispersed recreation improvements, hydroelectric operations, natural resource management, navigational protection, trails management, and transmission line construction and maintenance are just a few TVA operations occurring on the property. In addition, a small portion of this parcel was formerly used by TVA police as a pistol range. The pistol range is now nonoperational and gated to prohibit unauthorized entrance. Signs have also been placed at the entrance communicating the pistol range has been closed.

Along the powerline ROW, federally endangered gray bats (*Myotis grisescens*) have been recorded utilizing this parcel as foraging habitat. One cave is known to occur on this parcel but it is not known to provide habitat for any threatened or endangered species. Gray bats, eastern red bats, evening bats, and tricolored bats have been captured during mist net surveys on the adjacent Muscle Shoals Redevelopment Site. In addition, a radio tagged Indiana bat was tracked to the Muscle Shoals Reservation Redevelopment area in the spring of 2016. However the location of the roost tree could not be determined because the transmitter used the track the bat fell off the bat before the roost tree was located. Acoustic detectors subsequently operated by TVA staff near the presumed roosting area for several days did not record any Indiana bat

(or northern long-eared bat) calls. In 1976, a population of the state listed plant Dutchman's breeches (*Dicentra cucullaria*) was recorded in the First Quarters Natural Area. Additionally, the Alabama state champion paper mulberry tree is located within this parcel.

Sections 2.3 and 2.4 discuss the abundance of public recreation occurring on the parcel, and the construction, maintenance, and operations of land-based public recreational opportunities and associated facilities would continue to be considered as a secondary use of this property.

There is a high probability for the presence of cultural resources. Some portions of the parcel have been surveyed for cultural resources, and some sites have been found eligible for listing on the National Register of Historic Places. No existing shoreline improvements are currently present, and future requests for private shoreline alterations would not be considered.

Table 4−13. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Colbert, Alabama
Topographic Map (Sheet No. and Quadrant)	44−SE and 44−SW
TVA D−Stage Map Numbers	1 and 54
Stream Mile and Bank	TRMs 256.4−259.4L
Land Use / Land Cover	Deciduous forest and transmission line rights−of−way
Known Dispersed Recreation Opportunities	Bank fishing, camping, hiking, picnicking, walk/jog/run, and wildlife observation
Current Agreements/Commitments	• Permanent easements to the Alabama Department of Transportation for a road and vehicular bridge • Permanent easement to Colbert County, Alabama for a road • Revocable licenses to the Muscle Shoals Electric Board for a transmission line • Term easement to Muscle Shoals Laboratory Associates, Ltd. for an office building
Potential Projects	• Maintain Wildlife Habitat Council Certification • Placement of TVA property and public lands signs along the parcel boundary and shoreline • Promotion of wildflowers • Refresh the existing paint denoting TVA's property boundaries • Removal of non-native invasive plants • Systematic survey for historic properties
Potential Partners	• Florence Gardening Club • Northwest Shoals Community College • Shoals Environmental Alliance • University of North Alabama

Parcel 14 − (19.2 acres)

Proposed RLMP Allocation: Zone 2, Project Operations

This parcel consists of three noncontiguous tracts of land located adjacent to the reservation. However, this parcel is not located adjacent to the reservoir. Rights-of-way for U.S. Highway 43 (Hatch Boulevard) and Birmingham Street are present on the parcel. An Alabama State Trooper's office building is also present on the parcel. No federally or state-listed species are known to occur on this parcel. Since most of the parcel has been disturbed, there is a low probability for the presence of cultural resources. Future requests for private shoreline alterations would not be considered.

Table 4−14. Parcel Information

Location Component and Public Involvement Opportunities	Parcel Specific Information
County, State	Colbert, Alabama
Topographic Map (Sheet No. and Quadrant)	44−SW
TVA D−Stage Map Numbers	54
Stream Mile and Bank	Not located adjacent to the reservoir
Land Use / Land Cover	Hardwood forest, maintained lawns, and road rights−of−way
Known Dispersed Recreation Opportunities	None identified
Current Agreements/Commitments	• Permanent easement to the City of Sheffield, Alabama, for commercial development and a road • Permanent easement to the Alabama Department of Transportation for a road • Permanent easement to the State of Alabama for an office building
Potential Projects	• Refresh the existing paint denoting TVA's property boundaries • Systematic survey for historic properties
Potential Partners	None identified

CHAPTER 5. PLANNING TEAM

J. Kenley Austin

Position:	Program Manager, Reservoir Land Use and Permitting
Education:	B.S., Biology and Geography
Experience:	12 years in Planning and Managing Land; 8 years in Natural Resource Management
Involvement:	Planning Team and Deed interpretation

Chellye L. Campbell

Position:	Senior Specialist, Land Policy
Education:	B.S., Biology
Experience:	14 years in Planning and Managing Land
Involvement:	Deed interpretation and Land Policy guidance

Jerry G. Fouse

Position:	Recreation Specialist
Education:	M.B.A.; B.S., Forestry and Wildlife
Experience:	38 years in Natural Resources – Recreation Planning and Economic Development
Involvement:	Planning Team and Recreation Management

Thomas O. Maher

Position:	Senior Archaeologist
Education	Ph.D., Anthropology
Experience:	32 years in the field of Archaeology
Involvement:	Planning Team

Leonard L. McCurdy, Jr.

Position:	Senior Specialist, Reservoir Land Use and Permitting
Education:	B.S., Environmental Studies–Chemistry; J.D., Law
Experience:	25 years in the field of Law including 18 years in TVA real property rights
Involvement:	Deed interpretation and Land Policy guidance

Susan D. McDaniel

Position:	Process Integration Specialist
Experience:	30 years in Geographic Information Systems and Planning and Managing Land
Involvement:	Planning Team and preparation of geographic information system

Heather L. Montgomery

Position:	Senior Program Manager, Reservoir Lands Planning
Education:	B.S., Environmental Biology
Experience:	13 years in Planning and Managing Land and Environmental Impacts Evaluation
Involvement:	Project Manager

Mark T. Morrissey

Position:	Geographic Analyst
Education:	B.S., Geography
Experience:	2 year in Planning and Managing Land; 5 years in Industrial Safety and Compliance
Involvement:	Document Preparation; Planning Team; and Preparation of Geographic information Systems

Karen A. Rylant

Position:	Senior Specialist, Section 26a Policy and Process
Education:	Ph.D., Agronomy (Soil Chemistry); M.S., Soil Fertility; B.A., Chemistry, B.A., Geology
Experience:	8 years in Environmental Research; 5 years in Land and Shoreline Management
Involvement:	Deed interpretation and Section 26a guidance

Damien J. Simbeck

Position:	Watershed Representative
Education:	M.S., Zoology; B.S., Professional Biology
Experience:	23 years in aquatic, land, and natural resource management
Involvement:	Planning Team

CHAPTER 6. LITERATURE CITED

Alabama Department of Environmental Management. 2016. §303(d) List (Draft). Retrieved from http://www.adem.state.al.us/programs/water/303d.cnt (accessed August 2016).

Alabama Invasive Plant Pest Council. 2012. Rescuing and Preserving Our Natural Heritage. Retrieved from www.se-eppc.org/alabama/ (accessed August 2016).

Benson, A.J., D. Raikow, J. Larson, A. Fusaro, and A.K. Bogdanoff. 2016. Dreissena polymorpha. USGS Nonindigenous Aquatic Species Database, Gainesville, Florida. Retrieved from https://nas.er.usgs.gov/queries/FactSheet.aspx?speciesID=5 (accessed October 2016).

City of Florence. 2016. Florence, Alabama Veterans Park. Retrieved from http://www.fpard.com/Parks/Veterans_Park/index.html (accessed August 2016).

EDDMapS. 2016. Early Detection & Distribution Mapping System. The University of Georgia - Center for Invasive Species and Ecosystem Health. Retrieved from http://www.eddmaps.org/ (accessed October 2016).

Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. 19+ vols. New York and Oxford.

Hilty, John. 2015. Illinois Wildflowers. Retrieved from http://www.illinoiswildflowers.info/ (accessed July 2016).

Homer, C.G., Dewitz, J.A., Yang, L., Jin, S., Danielson, P., Xian, G., Coulston, J., Herold, N.D., Wickham, J.D., and Megown, K. 2015. Completion of the 2011 National Land Cover Database for the conterminous United States-Representing a decade of land cover change information. Photogrammetric Engineering and Remote Sensing, v. 81, no. 5, p. 345-354.

Hubbard, Preston J. 1963. Origins of the TVA: The Muscle Shoals Controversy. Vanderbilt University, Nashville, TN.

International Fertilizer Development Center. 2008. “Fertilizer Technology Used Worldwide, But Few New Products Since 1970s,” *ScienceDaily*, August 26, 2008. Retrieved from http://www.sciencedaily.com/releases/2008/08/080825103527.htm (accessed August 2010).

Ladybird Johnson Wildflower Center. 2013. Native Plant Information Network, NPIN. Lady Bird Johnson Wildflower Center at The University of Texas, Austin, Texas. Retrieved from http://www.wildflower.org/plants/ (accessed July 2016).

Lord, Aeck, and Sargent Architecture. 2009. Muscle Shoals Reservation Adaptive Re-Use Study – Conditions/Market/Planning/Implementation. Atlanta, Georgia: Lord, Aeck, and Sargent Architecture. Prepared for TVA.

McDonough, T. A. and G. D. Hickman. 1999. "Reservoir Fish Assemblage Index Development - A Tool for Assessing Ecological Health in Tennessee Valley Authority Impoundment," in Assessing the Sustainability and Biological Integrity of Water Resources Using Fish Communities, 523-540. Edited by T. Simon. Washington, D.C.: CRC Press.

Moore, Clarence B. 1915. Aboriginal Sites on the Tennessee River. Journal of the Academy of Natural Sciences of Philadelphia, second series 16(3).

National Recreation Trails Program. 2009. Muscle Shoals. Retrieved from http://www.americantrails.org/NRTDatabase/trailDetail.php?recordID=3 (accessed October 2010).

NatureServe. 2016. NatureServe Web Service. Arlington, Virginia. U.S.A. Retrieved from http://services.natureserve.org (accessed July 2016).

Pietak, L.M., A. Deter-Wolf, R. Nichols, J. D'Angelo, K. Wilson. 2002. Cultural Resources Survey for the Muscle Shoals Reservation, Lauderdale and Colbert Counties, Alabama. Report submitted to Tennessee Valley Authority.

Tennessee Department of Environment and Conservation. 2014. TDEC Rare Species data viewer. Retrieved from https://tn.gov/environment/article/tdec-dataviewers (accessed July 2016).

Tennessee Valley Authority. 1996. Muscle Shoals/Wilson Dam Reservation Land Use Plan Final Environmental Assessment. Muscle Shoals, Alabama: Tennessee Valley Authority, Muscle Shoals Land Management Office, November 1996. Retrieved from https://www.tva.gov/file_source/TVA/Site%20Content/Environment/Environmental%20Stewardship/Land%20Management/Land%20Plans/Wilson%20Dam%20and%20Muscle%20Shoals%20Reservations%20LUP.pdf (accessed October 2016).

———. 1999. Shoreline Management Initiative: An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley Final Environmental Impact Statement. Retrieved from https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Shoreline-Management-Policy (accessed October 2016).

———. 2005. Tennessee Valley Authority Recreation Strategic Plan: A Framework for Providing Recreation Opportunities On and Along the Tennessee River 2004-2005.

———. 2008. Wilson Dam Bascule Bridge Replacement Final Environmental Assessment. Retrieved from https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan (accessed October 2016).

———. 2011a. Natural Resource Plan: Alabama, Georgia, Kentucky, Mississippi, North Carolina, Tennessee, and Virginia, Final Environmental Impact Statement. Tennessee Valley Authority. 2011. Volumes 1 and 2. Retrieved from https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Natural-Resource-Plan (accessed October 2016).

———. 2011b. Muscle Shoals Reservation Redevelopment Final Environmental Impact Statement, Volumes 1 and 2. Retrieved from https://tva.com/Environment/Environmental-Stewardship/Environmental-Reviews/Muscle-Shoals-Reservation-Redevelopment (accessed October 2016).

———. 2016a. Reservoir Health Ratings. Retrieved from https://www.tva.gov/Environment/Environmental-Stewardship/Water-Quality/Reservoir-Health-Ratings (accessed July 2016).

———. 2016b. Tennessee Valley Authority Natural Heritage Database, Data Received 2016.

———. 2016c. Tennessee Valley Authority Reservoir Vital Signs Monitoring Program Fish Collections, Data Received 2016.

U.S. Census Bureau. 2010a. U.S. Census Bureau Population Division. Annual Estimates of the Resident Population: April 2010-July 1, 2015, UT Center for Business and Economic Research, 2003.

———. 2010b. American Fact Finder 2010-2014 American Community Survey, 5-year estimates. Retrieved from http://factfinder.census.gov/ (accessed July 2016).

———. 2015. Annual Estimates of the Resident Population: April 1, 2010-July 1, 2015. Retrieved from http://factfinder.census.gov/ (accessed July 2016).

USDA NRCS 2016. Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Retrieved from http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx (accessed July 2016).

U.S. Department of the Interior. 2008. Reclamation: Managing Water in the West; Resource Management Plan, Navajo Reservoir Area, Colorado and New Mexico, Final Environmental Assessment and Finding of No Significant Impact, June 2008.

U.S. Environmental Protection Agency. 2013. Level III Ecoregions of the Continental United States: Corvallis, Oregon, U.S. EPA– National Health and Environmental Effects Research Laboratory, map scale 1:7,500,000. Retrieved from https://pubs.usgs.gov/tm/04/c03/virtual_CD/useco.pdf (accessed July 2016).

U.S. Fish and Wildlife Service. 2016a. IPaC Trust Resources Report. Information, Planning and Conservation System. Retrieved from https://ecos.fws.gov/ipac/ (accessed October 2016).

U.S. Fish and Wildlife Service. 2016b. National Wetlands Inventory website. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. Retrieved from http://www.fws.gov/wetlands (accessed July 2016).

U.S. Geological Survey. 2016. Land Cover Trends Project. Retrieved from http://landcovertrends.usgs.gov/main/ecoIndex.html (accessed July 2016).

This page intentionally left blank

GLOSSARY

acre	A unit measure of land area equal to 43,560 square feet
cultural resources	Archaeological, historic, and architectural resources
dam reservation	Lands generally maintained in a park–like setting by TVA to protect the integrity of the dam structure, hydroelectric facilities, and navigation locks. The reservation also provides for public visitor access to the TVA dam facilities and recreation opportunities, such as public boat access, bank fishing, camping, picnicking, etc. Hunting is not typically allowed on dam reservations.
deciduous	Vegetation that sheds leaves in autumn and produces new leaves in the spring.
dispersed recreation	Recreation of an informal nature such as hunting, hiking, biking, bird watching, photography, primitive camping, bank fishing, and picnicking, etc. that occur on TVA land. These activities are not associated with developed facilities although some improvements may occur for access, health and safety, or to protect the environment.
embayment	A bay or arm of the reservoir
endangered species	A species in danger of extinction throughout all or a significant part of its range. Endangered species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.
Environmental Policy	A TVA Board–approved policy that communicates guiding principles to lead TVA successfully in the reduction of its environmental impact while continuing to provide reliable and competitively priced power to the Valley
forest	Vegetation having tree crowns overlapping, generally forming 60 to100 percent cover.
Land Policy	A TVA Board–approved policy that guides retention, disposal, and planning interests in real property
natural areas	Ecologically significant sites, lands set aside for particular management objectives, and lands that contain sensitive biological, cultural or scenic resources. The TVA natural area program includes small wild areas, habitat protection areas, wildlife observation areas, and ecological study areas.
plan tract	A numbered parcel of TVA fee–owned land that has been assigned, through the reservoir land planning process, an allocation to guide future land use decisions.
riparian	Related to or located on the banks of a river or stream
shoreland	The surface of land lying between the minimum pool elevation of a TVA reservoir and the maximum shoreline contour or TVA back–lying property (whichever is further)
shoreline	The line where the water of a TVA reservoir meets the shore when the water level is at the normal summer pool elevation.
shoreline access rights	TVA land encumbered with deeded or implied rights held by adjacent property owners. The deeded or implied rights allow individuals to construct water use facilities upon receipt of TVA's written approval of plans.
threatened species	A species threatened with extinction throughout all or a significant portion of its range or territory. Threatened species recognized by the Endangered Species Act or similar state legislation have special legal status for their protection and recovery.

This page intentionally left blank

INDEX

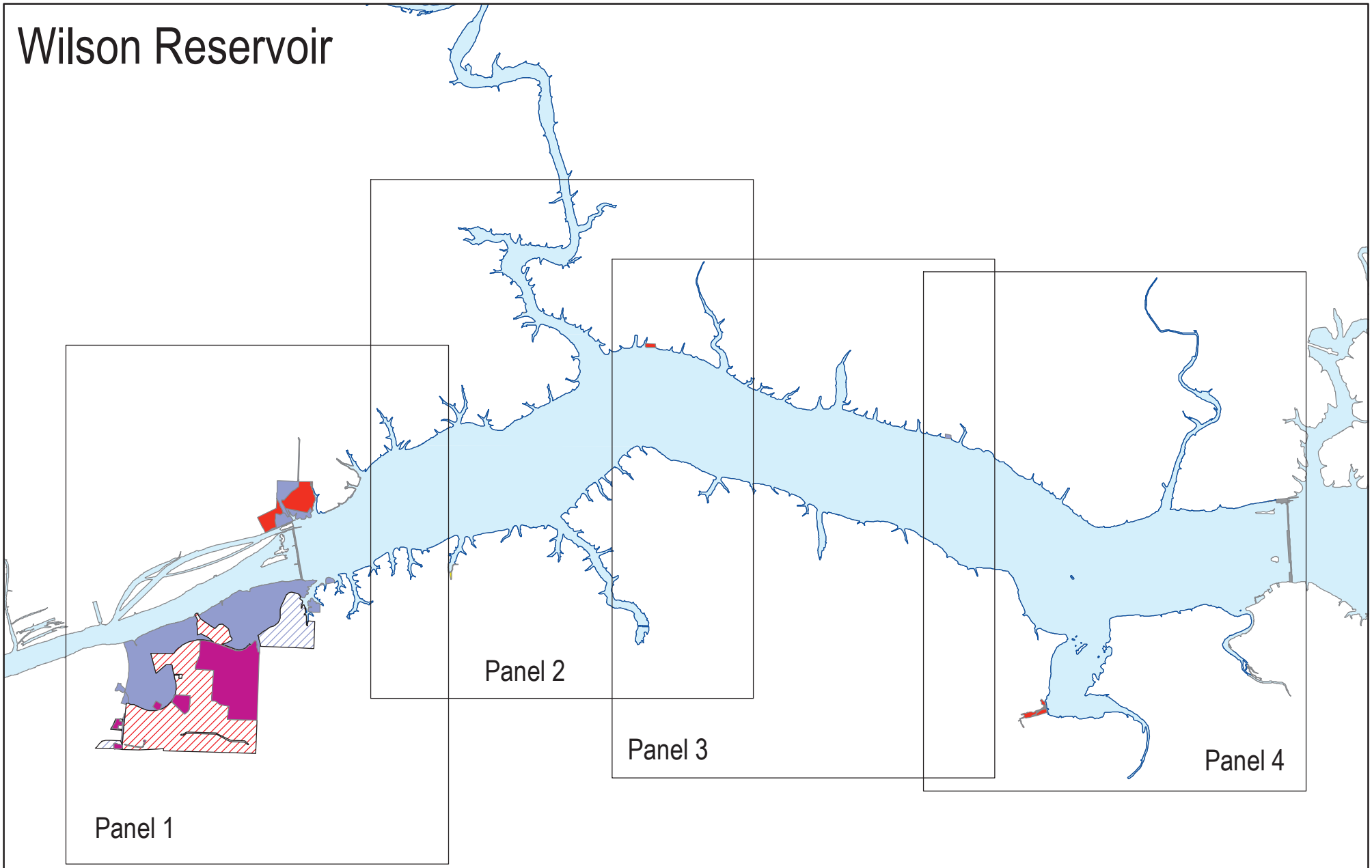
Advisory Council on Historic Preservation 41
Alabama .. ii, v, 7, 14, 18, 23, 24, 26, 27, 31, 33, 36, 40, 42, 43, 45, 46, 47, 49, 50, 60, 65, 66, 67, 68, 69, 70, 71, 72, 73, 75, 76, 79, 80
aquatic ecology ..... i, 19, 22
archaeological resource 41, 54
area of potential effect ..... v, 41
back-lying land 60, 63
Committed land 57
Comprehensive Valleywide Land Plan ..... iii, v, 6, 53, 61, 62, 63
cultural resource 40, 41, 59, 60, 65, 66, 67, 68, 69, 70, 71, 72, 73, 75, 76, 83
developed recreation 6, 12, 13, 14, 44, 56, 59, 60, 62, 65, 66, 68, 69, 70, 71, 74
dissolved oxygen 20, 37
ecologically significant site 43, 83
endangered species ..... i, 22, 27, 59, 74, 83
environmental impact statement ..... v, 1, 80, 81
Executive Order 18, 46
fish ..... ii, v, 19, 20, 22, 23, 31, 36, 49, 80, 81
flood 1, 9, 11, 38, 39, 41, 53
floodplain 11, 39
flowage easement 9, 11, 53
industrial 6, 9, 12, 22, 36, 37, 44, 53, 55, 56, 58, 59, 62, 63, 78
Kentucky 7, 15, 16, 80
land use .... i, iii, 3, 6, 10, 11, 12, 38, 41, 44, 53, 54, 57, 58, 59, 60, 61, 62, 63, 65, 66, 67, 69, 71, 72, 73, 75, 76, 77, 80, 83
maximum shoreline contour 83
mussel ..... i, 22, 25, 30, 34, 49
National Environmental Policy Act (NEPA) ..... v, 22, 43, 46, 53, 63
National Historic Preservation Act ..... v, 41
National Park Service ..... v, 43
National Register of Historic Places ..... v, 40, 42, 54, 60, 65, 75
natural area 43, 50, 54, 55, 56, 59, 83
plant communities 19, 27
prime farmland ..... i, ii, 11, 12
recreation .... i, ii, iii, 5, 9, 11, 12, 13, 14, 39, 47, 48, 49, 51, 54, 55, 56, 57, 58, 60, 65, 66, 67, 68, 69, 70, 71, 73, 74, 75, 76, 77, 80, 83
Reservoir Land Management Plan .. 1, iii, v, 1, 5, 6, 10, 11, 12, 13, 14, 17, 22, 27, 29, 36, 37, 39, 40, 41, 45, 47, 53, 57, 59, 60, 61, 62, 63, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 76
residential water use facilities 57
scoping 1
Section 106 of the National Historic Preservation Act 41
Section 26a of the TVA Act 11, 37, 53
sensitive resource 6, 12, 54, 55, 59, 62, 63
shoreline access 6, 11, 12, 44, 51, 53, 57, 59, 60, 62, 63, 72, 83
Shoreline Management Initiative ..... v, 3, 11, 39, 53, 80
Shoreline Management Policy ..... i, v, 3, 57, 63
socioeconomics ..... i, 45

speciesii, 15, 16, 17, 18, 19, 20, 22, 23, 27, 28, 29, 30, 31, 34, 36, 38, 51, 54, 55, 65, 66, 67, 68, 69, 70, 71, 72, 73, 76, 79, 80, 83
State Historic Preservation Officer 41
tailwater 47, 49
Tennessee .. 1, i, v, 1, 2, 7, 8, 9, 11, 13, 20, 25, 26, 29, 32, 33, 34, 35, 36, 39, 42, 43, 47, 49, 50, 66, 68, 70, 72, 74, 80, 81
Tennessee Valley Authority..... 1, i, ii, iii, v, 1, 2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 26, 27, 28, 29, 30, 31, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 49, 50, 51, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 79, 80, 81, 83
terrestrial ecology.....i, 14, 17
threatened..... i, 22, 26, 27, 54, 59, 74, 83
threatened species.....22, 83
TVA Land Policy 63
U.S. Army Corps of Engineers .....v, 65, 66
U.S. Environmental Protection Agency 81
U.S. Fish and Wildlife Service 15, 16, 17, 39, 49, 54, 81
visual resource.....i, 5, 43
wetland ..... i, ii, 15, 17, 30, 38, 39, 54, 59, 71, 72, 81
Wheeler 10, 39
wildlife.....ii, v, 14, 17, 19, 23, 28, 29, 36, 38, 39, 43, 50, 51, 54, 55, 66, 67, 75, 77, 81, 83
Wilson....i, ii, iii, v, 1, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 23, 27, 28, 29, 30, 31, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 49, 50, 51, 53, 58, 59, 60, 61, 62, 63, 65, 66, 67, 68, 72, 73, 74, 80, 91

Appendix A – Land Management Plan Maps – Panels 1 through 4

This page intentionally left blank

Wilson Reservoir



Click Panel to View PDF Map

This page intentionally left blank

Appendix B Comparison of Parcel Allocations by Alternative

This page intentionally left blank

APPENDIX B

Comparison of Parcel Allocations by Alternative

WILSON RESERVOIR

Of the 1,223.4 acres on Wilson Reservoir, there are no proposed allocation changes to any of the parcels.

See Table 1 below:

Table 1. No Proposed Allocation Changes			
Number of Parcels Per Zone Allocation			
Zone 2	8	Zone 5	0
Zone 3	0	Zone 6	5
Zone 4	0	Zone 7	1
Parcel	**No Action Allocation (Alterative A)**	**Proposed Allocation (Alterative B)**	**Acres per Allocation**
1	2	2	42.5
2	6	6	41.0
3	2	2	48.5
4	6	6	85.4
5	2	2	7.7
6	6	6	0.02
7	6	6	4.9
8	2	2	2.6
9	6	6	17.2
10	7	7	2.8
11	2	2	5.6
12	2	2	15.3
13	2	2	930.8
14	2	2	19.2
Total = 14 Parcels		**Total = 1,223.4 Acres**	

This page intentionally left blank