TENNESSEE VALLEY AUTHORITY

TELLICO RESERVOIR

FINAL RESERVOIR LAND MANAGEMENT PLAN

FINAL ENVIRONMENTAL IMPACT STATEMENT

JUNE 2000

TVA

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availability of funds. Awards made will be subject to periodic reporting and evaluation requirements.

Notification

Final awards cannot be made until funds have been appropriated by Congress, allocated and committed through internal Bureau procedures.

Dated: October 26, 2000.

Helena Kane Finn,

Principal Deputy Assistant Secretary, Bureau of Educational and Cultural Affairs, U.S. Department of State.

[FR Doc. 00–28185 Filed 11–1–00; 8:45 am]

BILLING CODE 8230–01–P

DEPARTMENT OF STATE

[Public Notice 3460]

Bureau of Educational and Cultural Affairs; Fulbright Student Program

NOTICE: Conference for bidders.

SUMMARY: The State Department's Bureau of Educational and Cultural Affairs announces a Conference for Bidders, inviting for discussion organizations that are interested in submitting a Proposal to administer the Fulbright Student Program. The conference will take place November 9, 2000 at 2 p.m. at the following location: SA–44, Room 800–A, 301 4th Street, SW., Washington, DC 20547.

FOR FURTHER INFORMATION CONTACT: Interested organizations should contact Rosalind Swenson at (202) 619–5384 prior to November 9, 2000 to schedule their attendance at the Conference.

The Fulbright Student Program was announced in the **Federal Register**, Volume 65, Number 206, on October 24, 2000.

Dated: October 25, 2000.

William B. Bader,

Assistant Secretary for Educational and Cultural Affairs, U.S. Department of State.

[FR Doc. 00–28184 Filed 11–1–00; 8:45 am]

BILLING CODE 4710–05–P

TENNESSEE VALLEY AUTHORITY

Tellico Reservoir Land Management Plan, Blount, Loudon, and Monroe Counties, TN

AGENCY: Tennessee Valley Authority (TVA).

ACTION: Issuance of record of decision.

SUMMARY: This notice is provided in accordance with the Council on Environmental Quality's regulations (40 CFR parts 1500 to 1508) and TVA's procedures implementing the National Environmental Policy Act. On August 29, 2000, the TVA Board of Directors decided to adopt the preferred alternative (Allocation Alternative) identified in its Final Environmental Impact Statement (EIS), Tellico Reservoir Land Management Plan.

The Final EIS was made available to the public in July, 2000. A Notice of Availability of the Final EIS was published in the **Federal Register** on July 7, 2000. Under the Allocation Alternative, TVA seeks to provide a clear statement on how it will manage its lands, based on scientific, cultural, and economic principles. The plan and EIS cover 12,643 acres of TVA lands on Tellico Reservoir. About half (6,103 acres) of the land is currently committed to specific uses, which would be continued. The remaining 6,540 acres have no outstanding commitments and their use is determined in the plan. The total 12,643 acres is allocated as follows: 9,321 acres for natural resource conservation and management; 635 acres for TVA project operations and public works; 331 acres for industrial and commercial development uses; 1,804 acres for recreation developments; and 552 acres for shoreline residential access.

FOR FURTHER INFORMATION CONTACT: Charles P. Nicholson, NEPA Specialist, Environmental Policy and Planning, Tennessee Valley Authority, 400 West Summit Hill Drive, WT 8C, Knoxville, Tennessee 37902–1499; telephone (865) 632–3592 or email cpnicholson@tva.gov.

SUPPLEMENTARY INFORMATION: During the development of the Tellico Project, TVA purchased about 37,737 acres of land. About 13,943 acres are normally covered by water during the summer, resulting in a reservoir pool with 360.8 miles of shoreline. About 11,150 acres of the remaining project lands were sold to the Tellico Reservoir Development Agency (TRDA) in November 1982. TVA has since entered into agreements for the use of about half the remaining lands. The management of the lands retained under TVA's control, as well as the lands sold to TRDA, is prescribed by the land plan included in a 1982 joint agreement (Contract No. TV–60000A) between TVA and TRDA.

In its 1999 Record of Decision on its Shoreline Management Initiative (SMI) Final EIS, TVA committed to developing comprehensive land management plans for all its reservoirs. These plans are intended to integrate land and water benefits, provide for the optimum public benefit, and balance competing, and sometimes, conflicting resource uses. In doing so, these plans will provide a clear statement of how TVA manages reservoir lands and identify the specific uses of individual land parcels.

TVA began public scoping and preparation of this plan in 1997. In late 1998, TVA determined that an EIS would be the appropriate level of environmental review. TVA then issued a Notice of Intent to prepare an EIS on January 14, 1999, and held a public scoping meeting two weeks later. The Notice of Availability for the Draft EIS was published on March 17, 2000. TVA subsequently held a public meeting in Lenoir City, Tennessee on March 28, 2000, to solicit comments on the Draft plan and EIS. Written and oral comments on the EIS were received from 36 parties. The Notice of Availability for the Final EIS was published on July 7, 2000.

Alternatives Considered

TVA considered two alternatives for planning the uses of 12,643 acres of Tellico Reservoir lands. A third alternative, which included the use of 850 acres of TVA land for a commercial development proposed by Tellico Landing, Inc., was dropped after the TVA Board announced on March 15, 1999, that it would not consider this proposal.

Under both alternatives, TVA would implement the categorization of residential and flowage easement shoreline, as defined in the SMI. The results of this categorization are as follows: Shoreline Protection, 1 mile; Residential Mitigation, 38 miles; and Managed Residential, 23 miles. TVA would also continue existing land uses on lands transferred to TRDA and other parties, and continue existing land uses on 6,103 acres of TVA lands under easement or other committed long-term use. About 6,540 acres have no committed uses and are considered plannable lands.

Under *Alternative* A, the *No Action Alternative,* TVA would continue to use the 1982 land use plan established by Contract No. TV–60000A with TRDA. The largest land use category is Cultural/Public Use/Open Space (61 percent of the area). Other categories include TVA Dam Reservation (5 percent), Natural/Wildlife (15 percent), Industrial Development (3 percent), Private Residential (3 percent), Recreation (11 percent), and Eastern Band of Cherokee Indians Memorial (1 percent).

Under *Alternative B*, the *Allocation Alternative*, TVA would adopt a new Reservoir Land Management Plan for 139 tracts of TVA land. The TVA lands would be allocated as follows: 5 percent

for TVA project operations and public works; 17 percent for management of sensitive resources such as rare species, wetlands, and cultural resources; 56 percent for natural resource conservation, with emphasis on public use; 3 percent for industrial and commercial development; 14 percent for recreational uses, and 4 percent for residential shoreline access. In response to comments on the Draft EIS, the Allocation Alternative was slightly modified in the Final EIS by changing the proposed use of a 140-acre recreation tract to natural resource conservation. TVA identified the Allocation Alternative as the preferred alternative in both the Draft EIS and the Final EIS.

During the preparation of the Plan and EIS, TVA consulted with the Tennessee State Historic Preservation Officer (SHPO), The Eastern Band of Cherokee Indians (EB), the United Keetoowah Band, the Cherokee Nation of Oklahoma, The Tennessee Commission of Indian Affairs, the Muscogee (Creek) Nation of Oklahoma, and the Poarch Band of Creek Indians on the identification and evaluation of historic properties within the Area of Potential Effect for the land plan. TVA, TDEC, SHPO, and EB executed a Memorandum of Agreement, dated June 23, 2000, stipulating measures that will be carried out by TVA prior to the commencement of ground-disturbing activities or transfer of property rights. This agreement allows phased identification, evaluation, and treatment of historic properties, and ensures that the effects on historic properties of future activities undertaken in implementing the Tellico Reservoir Land Management Plan will be taken into account.

Response to Comments on Final EIS

Appendix A–2 of the Final EIS contains summaries of and responses to the comments TVA received on the Draft EIS. TVA received comments from 36 individuals and organizations.

The Environmental Protection Agency (EPA) commented on the Final EIS. EPA noted that TVA neglected to include the EPA rating of the Draft EIS. This rating was EC–2: Environmental Concerns with some modification of the Plan requested. EPA also asked for more information on prospective forest management activities on TVA lands. Forest management activities could be carried out on lands allocated for natural resource conservation to achieve TVA's objective of maintaining or enhancing ecological diversity. The Plan and Final EIS do not propose specific forest management activities. Such activities would, instead, be determined by tract-specific management plans developed with public and peer agency input and consideration of potential environmental impacts. Potential forest management activities could include timber harvesting by both clearcutting and selection methods, thinning, prescribed burns, and reforestation. Based on past experience, clearcutting of large areas is not expected. Forest management activities would likely occur on less than 100 acres of natural resource conservation lands each year and would include measures to protect the reservoir shoreline and prevent water quality degradation.

EPA asked whether TVA will monitor the number of people recreating in the area to help control their environmental impacts. TVA does not have any plans to formally monitor the number of people recreating in the area. However, TVA will continue to monitor the environmental conditions of the reservoir through its standard operations.

EPA also asked whether any residential development on reservoir lands will be consistent with the Shoreline Management Initiative Final EIS/Record of Decision. The implementation of the shoreline categorization component of the SMI is described above. Applicants for residential shoreline alterations would have to comply with the standards adopted in the SMI Record of Decision. In an initiative, unique to Tellico Reservoir, guidelines that are more restrictive than those in the SMI would be applied to the River Corridor area in view of the need to protect the sensitive resources in this area.

Decision

The TVA Board adopted the Tellico Reservoir Land Management Plan as described in Alternative B on August 29, 2000. Alternative B optimally balances recreation use, resource conservation needs, and residential shoreline access needs in a way that maintains the quality of life and other important values provided by Tellico Reservoir. Alternative B sets aside parcels containing sensitive resources and habitats in the Sensitive Resource Protection and Natural Resource Conservation categories. TVA is adopting commitments under Alternative B to further minimize the potential for adverse impacts to the environment. These commitments are listed below, under Environmental Commitments. With these mitigation measures, all practicable means to avoid or minimize environmental harm would have been adopted.

Environmentally Preferred Alternative

TVA has concluded that Alternative B is the environmentally preferable alternative. It allocates the majority of TVA lands to long-term resource conservation and management uses, provides for compatible recreation developments, and enhances the protection of the riverine portions of the reservoir.

Environmental Commitments

TVA is adopting the following measures to minimize environmental impacts:

- TVA will follow the procedures specified in the memorandum of agreement with the State Historic Preservation Officer for the identification, evaluation, and treatment of historic properties that are eligible for inclusion in the National Register of Historic Places.
- U.S. Fish and Wildlife Service guidelines will be used to establish and maintain buffer zones around bald eagle nests.
- The current practice of prohibiting the construction of water-use facilities and shoreline alterations within the marked limits of safety landings will be continued to avoid interference with commercial navigation.
- Noise covenants consistent with the guidelines described in Section 3.12.2. of the Final EIS will be included in land transfer instruments pertaining to parcels in Zone 5.
- Amenities provided in Coytee Springs Recreation Area (Parcel 10) (*e.g.* picnic areas, walking trails, and greenway entry/exit points) will be limited to day-time use.
- Guidelines proposed in Appendix B–1 of the Final EIS will be consulted in reviewing applications for water-use facilities on the River Corridor.

Dated: October 23, 2000.

Kathryn J. Jackson,

Executive Vice President, River System Operations & Environment.

[FR Doc. 00–28183 Filed 11–1–00; 8:45 am]

BILLING CODE 8120–08–U

DEPARTMENT OF TRANSPORTATION

Office of The Secretary

Application Of Kitty Hawk International d/b/a American International Airways and Kalitta Air, L.L.C. For Transfer Of Certificate Authority

AGENCY: Department of Transportation.

ACTION: Notice of order to show cause (Order 2000–10–29) Docket OST–2000–7588.

Final Environmental Impact Statement

Tellico Reservoir Land Management Plan

June 2000

TVA

FINAL ENVIRONMENTAL IMPACT STATEMENT

TELLICO RESERVOIR

LAND MANAGEMENT PLAN

This Assessment was Prepared by
The Tennessee Valley Authority
Resource Stewardship
Little Tennessee Watershed Team
804 Highway 321 North
Lenoir City, Tennessee 37771

June 2000

TELLICO RESERVOIR LAND MANAGEMENT PLAN

Blount, Loudon, and Monroe Counties, Tennessee

Responsible Federal Agency: Tennessee Valley Authority (TVA)

Abstract: TVA has prepared a Final Environmental Impact Statement (EIS) and a TVA comprehensive Land Management Plan (Plan) for the 12,643 acres (360.8 shoreline miles) of TVA land above the summer operating range (812-813 elevation) on Tellico Reservoir. The EIS documents the analysis of alternative uses of the TVA lands and their influence on the surrounding environment. The Plan provides a clear statement of how TVA would manage its land in the future, based on scientific, cultural, and economic principles. This Plan takes into account the comments received from the general public in the east Tennessee area. The Plan prepared for Tellico Reservoir is intended to guide TVA resource and property management decisions for the next ten years. It identifies the most suitable range of uses for 139 parcels of TVA public land. TVA considered two alternatives for making land use decisions for the TVA land around Tellico Reservoir. Under the No Action Alternative (Alternative A) TVA would continue to use the existing land use plan to manage TVA land on Tellico Reservoir. Under the Allocation Alternative (Alternative B), an updated and revised Tellico Reservoir Land Management Plan is proposed.

The draft of the EIS was distributed in February 2000. TVA received 34 sets of comments on the draft. The EIS includes responses to these comments. The full EIS and Tellico Reservoir Land Management Plan can be viewed on the Internet at http://www.tva.gov/environment/reports/tellicoeis.

Requests for further information should be directed to:

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EXECUTIVE SUMMARY

The Tennessee Valley Authority has prepared this Environmental Impact Statement (EIS) on alternative plans for the management of TVA lands around Tellico Reservoir. Public involvement began in January 1997 with the publication of an article announcing that planing was under way on Tellico Reservoir in TVA *River Neighbors* magazine, distribution of a questionnaire, solicited input from representatives of a cross-section of groups of people who use or are concerned with the resources of Tellico Reservoir. Since then, members of the public and various other agencies have participated in the preparation of this EIS by attending a public scoping meeting on January 28, 1999; providing 1,391 sets of comments on scoping issues; attending a public meeting on the Draft EIS; and providing 34 sets of comments on the Draft EIS.

Alternatives

TVA considered two alternative plans for making land use decisions for the TVA land around Tellico Reservoir. Under the No Action Alternative (Alternative A), TVA would continue to use the existing 1982 land use plan, Contract No. TV-60000A, to manage TVA land on Tellico Reservoir. Under the Allocation Alternative (Alternative B), TVA would use an updated Tellico Reservoir Land Management Plan to guide future land use decisions

A common feature of both alternatives is categorization of the residential shoreline. In accordance with the TVA Shoreline Management Initiative (SMI) Record of Decision, three categories used for residential shoreline includes Shoreline Protection, Residential Mitigation and Managed Residential.

Alternative A – No Action Alternative

TVA would continue to use the existing land use plan established by Contract No. TV-60000A with the Tellico Reservoir Development Agency (TRDA). This plan allocates land into three categories: TVA Retained Land, Easement Land, and Transferred Land.

TVA Retained Land (9959 acres) includes TVA Dam Reservation, Cultural/Public Use/Open Space Areas, Industrial Development Areas, and Natural/Wildlife Areas.

Easement Land (591 acres) includes Public Use Recreation Areas, State Recreation Areas, and the Eastern Band of the Cherokee Indians Memorial Site.

Transferred Land (10,949 acres) includes Private Residential Areas, Commercial Recreation Areas, and other development land types.

Alternative B – Allocation Alternative

Alternative B, the proposed Tellico Reservoir Land Management Plan (Plan), was developed using information obtained from the public, existing and newly-collected field data both on land conditions and resources, and technical knowledge of TVA staff. It would allocate land into categories that emphasize sensitive resource management (preservation and enhancement

of wetlands, biodiversity, and archaeological and historic resources) and natural resource conservation.

Foreseeable public recreation projects that have been conceptually proposed by various agencies for Tellico Reservoir are presented as they would be considered under Alternative B. However, each of these proposals could be considered under either alternative. Once they become formal proposals, the compatibility of the proposal with land use allocations or zoning would be considered, and each proposal would be subjected to the appropriate level of additional environmental review. A small amount of development is included to accommodate proposals of the Eastern Band of the Cherokee Indians Development, the Greenway (Tennessee Department of Environment and Conservation), and the Coytee Springs Recreation Area. More restrictive development standards would be applied to the Tellico River Corridor.

TVA considered a wide range of possible land uses in the development of this Plan. Each parcel of land was reviewed to determine its physical capability for supporting certain uses, suitability of supporting these uses, and public needs. Based on this information, TVA allocated land parcels to one of seven planning zones: Non-TVA Shoreland (Zone 1), TVA Project Operations (Zone 2), Sensitive Resource Management (Zone 3), Natural Resource Conservation (Zone 4), Industrial/Commercial Development (Zone 5), Recreation (Zone 6), and Residential (Zone 7).

Zone 1: Non-TVA Shoreland includes shoreland located above the summer water level that TVA does not own in fee or land never purchased by TVA. TVA is not allocating private or other non-TVA land

Zone 2: TVA Project Operations (635 acres) includes TVA reservoir land currently used for TVA operations and public works projects.

Zone 3: Sensitive Resource Management (2,184 acres) includes 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. 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.

Zone 4: Natural Resource Conservation (7,137 acres) includes 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, resource management, wildlife observation, and camping on undeveloped sites.

Zone 5: Industrial/Commercial Development (331 acres) includes land managed for economic development purposes.

Zone 6: Recreation (1,804 acres) includes all reservoir land managed for concentrated, active recreation activities that require capital improvement and maintenance.

Zone 7: Residential (552 acres) includes TVA lands where Section 26a applications and other land use approvals for residential shoreline alterations are considered. Requests for residential shoreline alterations are considered on parcels identified in this zone where such

use was previously considered and where the proposed use would not conflict with the interests of the general public. As provided for in the SMI, residential access would be divided into three categories based on the presence of sensitive ecological resources.

Adoption of Alternative B would result in the supplementation of Contract No. TV-60000A to reflect the changes in land use designations.

Alternatives Eliminated from Consideration

The January 14, 1999, Notice of Intent to prepare the Draft EIS described three alternative plans. Two of these constitute Alternatives A and B, described above. The third alternative was similar to Alternative B, except that it would have allocated 853 acres of TVA retained land on the downstream east bank of the reservoir for a commercial recreation and residential development proposed by Tellico Landing, Inc. The Tellico Landing development would have also included 217 acres of TRDA land and backlying private lands. The TVA Board announced on March 15, 1999, that it would no longer consider the Tellico Landing proposal affecting TVA retained properties. Consequently this third alternative was eliminated from consideration in the EIS.

Comparison of Alternatives

A major change from existing land designations is the creation of Zone 3 (Sensitive Resource Management); land containing sensitive resources such as sensitive species, archaeological resources, significant visual resources, wetlands, and others is allocated to this zone. Under Alternative A, the resources identified for protection would be protected by individual environmental reviews of specific land use proposals. However, allocation of these resources to Zone 3 in Alternative B allows the protection of the sensitive resource to be the overriding objective for the management of a particular parcel of land, as well as providing an additional tool to better manage the potential for cumulative effects which might occur to a sensitive resource.

Proposed Mitigation Measures

1. TVA will follow the procedures specified in a Memorandum of Agreement with the State Historic Preservation Officer for the identification, evaluation, and treatment of historic properties that are eligible for inclusion in the National Register of Historic Places.
2. USFWS guidelines would be used to establish buffer zones around nesting bald eagle nests.
3. The current practice of prohibiting the construction of water use facilities and shoreline alterations within the marked limits of the safety landing would be continued to avoid interference with commercial navigation.
4. Noise covenants consistent with the guidelines described in Section 3.12.2. would be included in land transfer instruments pertaining to parcels in Zone 5.
5. Amenities provided in Coytee Springs Recreation Area (Parcel 10) (e.g. picnic areas, walking trails, and greenway entry/exit points) would be limited to day-time use.
6. Guidelines proposed in Appendix B-1 would be consulted in reviewing applications for water use facilities on the River Corridor.

Preferred Alternative

TVA has selected new Tellico Reservoir Land Management Plan (alternative B) as the preferred alternative. Alternative B was designed to meet the desires of a majority of the members of the public and various agencies who commented on the draft EIS. This alternative formulates a new and comprehensive Reservoir Land Management Plan for 139 parcels of TVA land on Tellico Reservoir. This Plan grandfathers previous land use commitments and allocates uncommitted TVA land into zones that allow for a balance of development and conservation. The results of the evaluation of possible environmental effects (summarized in section 2.4) indicate that Alternative B would not have adverse environmental effects. Alternative B would allocate land into categories that emphasize sensitive resource management and natural resource conservation. Selection of this alternative would be beneficial to public lands and would protect current resource functions and values.

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1. PURPOSE OF AND NEED FOR ACTION

1.1 Purpose

In November 1979, the gates of the newly-constructed Tellico Dam were closed, and the multipurpose TVA reservoir began backing up the Little Tennessee and Tellico Rivers. The Tellico Project, once known as the "Fort Loudoun Extension" and planned since the late 1930s, consists of the Tellico Reservoir and the adjacent lands purchased by TVA. Approximately 37,737 acres of land were purchased for the project. Of that, 13,943 acres are normally covered by water during the summer, resulting in a reservoir pool with 360.8 miles of shoreline. The balance of the acquired Tellico Project lands is used for industrial, residential, and commercial and public recreation purposes. Table 1.1-1 shows the current land use status and Figure 1.1-1 is a map of the Tellico Reservoir and vicinity.

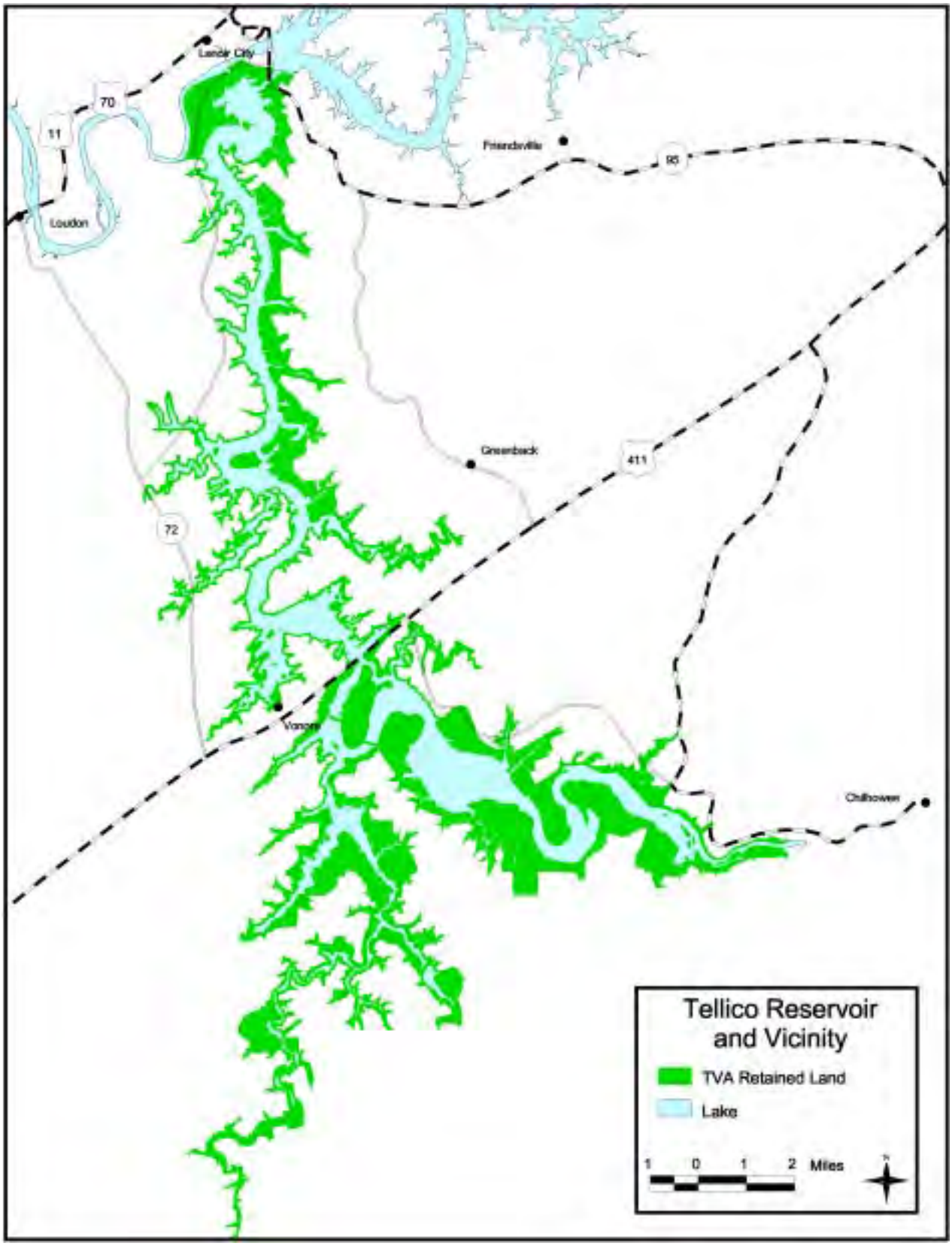
Table 1.1-1 Current Land Use Status

Land Status	Acreage
Committed (unplannable) Land	6,103.0
Uncommitted (plannable) Land	6,539.8
Land below 813-feet contour elevation	13,943.0
Land Conveyed to TRDA	11,151.0
Total	**37,736.8**

In April 1982, the Tellico Reservoir Development Agency (TRDA) was created by the Tennessee Legislature to assist TVA in the development of 11,151 acres of land acquired for the Tellico Project. A public auction sale of this land to TRDA was held on November 26, 1982. TRDA is a public corporation with a mandate to plan programs and implement activities for the comprehensive development of the land sold and easements for Public Recreation conveyed to it by TVA. TRDA's management, use, development, and conveyance of these lands are governed by a joint agreement (Contract No. TV-60000A) between TVA and TRDA which was made and entered into on August 25, 1982.

One of the major objectives for creating the Tellico Project, reflected in the integrated land plan included in Contract No. TV-60000A, was to develop and use the acquired lands that surround the reservoir in a way that would permit the project to make the maximum possible contribution to the economy of the region.

Figure 1.1-1 Map of Tellico Reservoir



TVA develops reservoir land plans in order to systematically manage its reservoir property. These plans seek to integrate land and water benefits, provide for the optimum public benefit, and balance competing and, sometimes, conflicting resource uses. By providing a clear statement of how TVA manages land and by identifying each parcel for specific purposes, TVA hopes to balance conflicting land uses and facilitate decision making for use of its land. Plans are approved by the TVA Board of Directors and adopted as agency policy to provide for long-term land stewardship and accomplishment of TVA responsibilities under the TVA Act.

Comprehensive land management plans have been completed and implemented for seven mainstream and two tributary reservoirs. The purpose of this Final Environmental Impact Statement (EIS) is to examine the impacts of possible alternative uses of TVA's remaining land on the Tellico Reservoir.

1.2 Other Pertinent Environmental Reviews or Documentation

Tennessee River and Reservoir System Operation and Planning Review (TVA, 1990). In December 1990, TVA completed an Environmental Impact Statement (EIS) addressing changes to the operation of its reservoir system, with emphasis on water quality and lake levels. In the EIS, TVA also addressed the environmental and socioeconomic consequences of changes in reservoir operations on land and shoreline development. Following completion of the review, TVA delayed the late summer drawdown of tributary reservoirs until August 1. It also began a system-wide program, now nearing completion, to improve water quality below dams.

Shoreline Management Initiative (SMI): An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley (TVA, 1998a). In 1998, TVA completed an EIS to assess residential shoreline development impacts on its reservoirs throughout the Tennessee Valley. The Record of Decision (ROD) for SMI was signed on May 24, 1999. Under the Blended Alternative adopted in the ROD, sensitive natural and cultural resource values of reservoir shorelines would be conserved and retained by: (1) preparing a shoreline categorization for individual reservoirs; (2) encouraging voluntary donations of conservation easements to properties over which TVA holds a flowage easement (property over which TVA has the right to flood) or other shoreland to protect scenic landscapes; and (3) establishing a premise that no additional residential access rights will be granted across public shorelines unless a "maintain and gain" policy to prevent losses of public shoreline is implemented. However, the Tellico Reservoir Land Management Plan (Plan) would comply with SMI to the extent allowable by the terms and conditions of the existing Contract No. TV-60000A. Since TVA Board approval, the SMI has become policy and is referred to as the Shoreline Management Policy (SMP).

Change in Land Use Designation to Allow Residential Development of the Bat Creek Peninsula (TVA, 1994). TVA completed an Environmental Assessment (EA) on the potential environmental impacts of a TRDA proposal to change the land use designation of the 1060-acre Bat Creek Peninsula from Industrial to Residential. TVA approved the land use change, with the requirement that the developer implement several mitigative measures to minimize potential environmental impacts. The area is now the Rarity Bay development.

1.3 The Decision

TVA will decide whether to adopt a new Tellico Reservoir Land Management Plan (Volume 2) as TVA policy or to continue the use of the 1982 land use plan described in Contract No. TV-60000A as supplemented.

1.4 Public Involvement and Scoping

In January 1997, an article was published in the *TVA River Neighbors* announcing that planning was under way on Tellico Reservoir. This publication was sent to over 20,000 stakeholders inside and outside the Tennessee Valley. Thirty-two people responded by calling 1-800-TVA-LAND and asking to be placed on the land planning mailing list for Tellico Reservoir. This 1-800 number is still available for anyone to call and request to be added to the mailing list.

A questionnaire was developed and sent to these and other interested parties for their comments concerning land use on Tellico Reservoir. Questionnaires were given to 5th and 6th grade students to take home to their parents at the following area schools: Highland Park Elementary (Loudon County), Madisonville Intermediate (Monroe County), and Eagleton Elementary (Blount County). A similar questionnaire was developed for local county and city officials, area planning organizations, and other stakeholder groups concerning land use on Tellico Reservoir. Nearly 400 questionnaires were distributed in the area. The questionnaire and corresponding responses provided in Appendix A-1 were used in identifying issues of concern to the public and developing land use designations for parcels.

TVA staff also solicited input from representatives of a cross-section of groups of people who use or are concerned with the resources of Tellico Reservoir. Interested state and federal agencies such as the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers(USACE), Tennessee Division of Forestry, and the Tennessee Wildlife Resources Agency (TWRA), and other natural resource oriented groups such as the Tennessee Conservation League, were asked to participate in the Tellico Reservoir land planning process. These groups were asked about land use issues around Tellico Reservoir. The responses from these groups are provided in Appendix A-1 and were used in identifying issues of concern to the public and developing land use designations for parcels.

Internal scoping and historical information, as well as comments from the general public, public officials, stakeholders, peer agencies, and focus groups were used to identify the following resources/issues that are considered in this EIS:

- Visual Resources
- Cultural Resources, including Archaeological Resources
- Threatened and Endangered Species
- Terrestrial Ecology and Significant Natural Features
- Wetlands and Riparian Ecology
- Recreation
- Water Quality
- Aquatic Ecology
- Socioeconomics
- Navigation
- Prime Farmland

The following issues, also identified in scoping, are not likely to be issues affected by the proposed alternatives:

- Floodplains
- Noise
- Air Quality

TVA originally anticipated completing an EA on the Tellico land plan. However, in October of 1998, the Tellico Landing, Inc. (TLI), development group updated and renewed their 1994 request to develop approximately 850 acres of TVA property in conjunction with 217 acres of TRDA property known as Lower Jackson Bend. In anticipation of the additional issues and concerns that could be generated by a commercial development along 7 river miles of the Tellico shoreline, TVA raised the level of NEPA review from an EA to an EIS. A Notice of Intent (NOI) to prepare an EIS was published in the *Federal Register* on January 14, 1999 (Volume 64, Number 9), with a comment period that was extended to March 5, 1999. A public meeting was held on January 28, 1999, at the Lenoir City High School with well over 700 people in attendance. The three proposals identified for this meeting concerned: 1) a Greenway from Lotterdale Cove to Lower Jackson Bend, 2) a River Corridor concept that would be applied to the upper reaches of the Tellico River, and 3) the proposed TLI development. By far, most of the issues raised at the meeting, and in the balance of the public comment period, were centered on the commercial development of TVA property proposed by TLI.

On March 15, 1999, the TVA Board of Directors issued a public statement dropping the TLI proposal from further consideration. Consequently, many of the issues identified at the public meeting and in the subsequent comment period such as boat and automotive traffic, noise, night light, water quality, and visual impacts,

had lesser significance. Plans to conduct appropriate in-depth surveys addressing such issues were no longer necessary.

TVA accepted comments on the DEIS and Plan from February 18 through May 10, 2000. Comments could be made by:

- Visiting the TVA website at http://www.tva.gov/environment/reports/tellico;
- Sending comments to Steven L. Akers, Little Tennessee Watershed Office, 804 Highway 321, Lenoir City TN 37771;
- Emailing slakers@tva.gov;
- Calling 1-800-TVA-LAND; or
- Attending the public open house information session at the Lenoir City High School March 28, 2000. TVA staff were available between the hours of 4:30 and 9 p.m. to answer questions and discuss the DEIS and Plan with the public. During the information session the public also had an opportunity to record their comments verbally or in writing.

Following public review and comment on the DEIS and agency response to those comments (see Appendix A-2), this Final EIS is being issued by TVA. The proposed Plan and Final EIS will be presented to the TVA Board of Directors for their consideration and approval of an alternative. If approved, TVA will then issue its Record of Decision, and the selected alternative will be adopted as the Agency's policy to provide for long-term stewardship and accomplishment of TVA responsibilities under the 1933 TVA Act.

1.5 Necessary Federal Permits or Licenses

No federal permits or licenses are required to develop a reservoir land plan. To the extent possible, site specific background information on reservoir resources has been characterized in this EIS, and the potential impacts on these resources were considered in making the parcel allocations. Appropriate agencies regulating wetlands, endangered species, and historic resources have been consulted during this planning process. When specific actions such as a dock, building, road, or walking trail are proposed that could affect sensitive resources, additional review and appropriate permits or consultations may be required in order to gain approval of the actions.

2. ALTERNATIVES, INCLUDING THE PROPOSED ACTION

This chapter describes the two alternatives (the No Action and Allocation Alternatives) and summarizes the environmental consequences associated with each alternative.

2.1 The Proposed Action

The proposed action is to formulate a comprehensive Plan to guide resource and property management decisions for TVA land on Tellico Reservoir. The Plan is intended to provide a clear direction for management, based on scientific, cultural, and economic principles. The Plan will address sensitive resources and issues and concerns raised by the public. In the Plan, TVA will also seek to integrate management of land and water resources, to provide increased public benefits, and to balance competing and, sometimes, conflicting resource uses. The Plan takes into account the comments received from the general public. It identifies the proposed range of uses for 12,643 acres (139 parcels) of TVA-owned public land.

2.2 Alternatives

TVA is considering two alternatives for making land use decisions for TVA land around Tellico Reservoir. Under the No Action Alternative (Alternative A), TVA would continue to use the existing 1982 land use plan, Contract No. TV-60000A, to manage TVA land on Tellico Reservoir. Under the Allocation Alternative (Alternative B), TVA would use an updated Tellico Reservoir Land Management Plan to guide future land use decisions.

For either alternative, Section 26a of the TVA Act requires that TVA approval be obtained prior to construction, operation, or maintenance of any dam, appurtenant works, or other obstruction affecting navigation, flood control, public lands, or reservations along or in the Tennessee River and its tributaries. TVA will consider Section 26a applications for residential shoreline alterations and related land use approvals only on lands specifically allocated for residential development or where the backlying property owners have the necessary rights for such use. A common feature of both alternatives is categorization of the residential and flowage easement shoreline. In accordance with TVA's SMP, the following three categories will be used:

- **Shoreline Protection** for shoreline segments that support sensitive ecological resources, such as federally-listed threatened or endangered species, high priority state-listed species, wetlands with high function and value, archaeological or historical sites of national significance, and certain navigation restrictions zones. Within this category, all significant resources will be protected.

- **Residential Mitigation** for shoreline segments where resource conditions or certain navigation restrictions would require special analysis of individual development proposals, additional data, or specific mitigation measures.

- **Managed Residential** for shoreline segments where no sensitive resources are known to exist. Routine environmental review would be completed for any proposed action.

Approximately 1.1 percent (1 mile) of the residential shoreline on Tellico Reservoir is in the Shoreline Protection category; 61.6 percent (38 miles) is in the Residential Mitigation category; and 37.4 percent (23 miles) is in the Managed Residential category.

Docks and other residential shoreline development would not be permitted on lands within the Shoreline Protection category because of the significant and sensitive nature of the resources contained in this area. By contrast, Section 26a applications for docks and other residential shoreline development in the Residential Mitigation area would be reviewed by TVA for compliance with the Shoreline Management Policy (SMP) (TVA, 1998a), and the Section 26a regulations; however, development restrictions or mitigation measures may be necessary in this shoreline category. Section 26a applications for docks and other shoreline development in the Managed Residential area would also be reviewed for compliance with the SMP and Section 26a regulations.

As new data are collected on the spatial location and significance of endangered species, wetlands, and cultural resources, TVA expects that adjustments to category boundaries may be necessary. Over time, some Shoreline Protection areas or Residential Mitigation areas could be moved into Managed Residential areas if new resource information warrants such a change. Similarly, some Managed Residential areas could be moved into the Shoreline Protection or Residential Mitigation category if new information supports such a change. Property owners should check with the Little Tennessee Watershed Team office for the current status of an area.

2.2.1 Alternative A – No Action Alternative

Under the No Action Alternative, TVA would continue to use the 1982 land use plan established by Contract No. TV-60000A with the Tellico Reservoir Development Agency. This plan allocates land into three categories: TVA retained land, transferred land, and land under easement.

Contract No. TV-60000A serves as a general guide for land use and/or development and documents actual and prospective use indicated for all land surrounding the reservoir. When a proposal is received from an external applicant or from an internal TVA initiative, the proposed land use is evaluated for consistency with the plan and the request is either approved or denied based on the

results of an environmental review and other considerations. Copies of TVA Contract No. TV-60000A and its supplements are available for review and recorded at the Loudon, Monroe, and Blount County Courthouses.

On Tellico Reservoir, land has been sold or transferred for various uses including industrial, residential, natural resource management, recreation, water treatment facilities, pump stations, and highway rights-of-way. Under Alternative A, these land use designations would continue as shown on Attachment A of Contract No. TV-60000A. Attachment A, also known as the Tellico Lake Recreation Map, shows the boundaries and locations of the land use designations established by this contract. In accordance with the Shoreline Management Initiative (TVA, 1998a), the land below the 820-foot (mean sea level [msl]) maximum shoreline contour, which TVA retained in fee, would be controlled by the outstanding landrights or rights implied from the use of the backlying land (such as industrial or residential access).

Attachment B of Contract No. TV-60000A is known as The Development Standards for the Tellico Project. The development standards promote public health, safety, convenience, and general welfare; ensure development based upon all applicable environmental requirements and sound land use practices; and foster the orderly development of the Tellico Project through the proper development, maintenance, management, and sale of land acquired by TVA.

Attachment C of Contract No. TV-60000A, Procedures for Approval of Private Recreational Water use facilities on Tellico Reservoir, addresses requests for approval of private recreational water use facilities on Tellico Reservoir. Under this agreement, a request for privately-owned facilities will be considered if it meets one of the following conditions: (1) the adjoining private property lies within 100 feet of the 820-msl contour and abuts those areas designated for Cultural/Public Use/Open Space Areas and Private Residential Areas; (2) the adjoining private property has outstanding rights of ingress to and egress from the reservoir pursuant to a deed or other similar document regardless of the distance from the 820-msl contour; or (3) the adjoining property was transferred by TVA to TRDA pursuant to Contract No. TV-60000A, and the proposed request meets the requirements established in Attachment B of the contract.

Requests under (1) and (2) above, complying with these criteria will be reviewed for conformity with TVA's Section 26a regulations and applicable program and policy interests, including TVA environmental review procedures and Executive Order Nos. 11988 (Floodplain Management) and 11990 (Protection of Wetlands), as applicable. Requests under (3) will be reviewed in accordance with the provisions of Attachment B to Contract No. TV-60000A and must be authorized by a Section 26a permit. All requests will be subject to shoreline development policies established by the TVA Shoreline Management Initiative (TVA, 1998a).

In cases where the applicant does not hold outstanding ingress/egress rights, but has submitted a request that complies with other TVA criteria and is acceptable to the USACE, TVA would consider granting the applicant a recreational easement. This type of easement is a unique feature used on the Tellico Project and conveys nonexclusive rights of ingress to and egress from the reservoir with permission to construct and maintain noncommercial water use facilities. The sale price is based upon TVA's appraisal of the value of the access rights to be conveyed plus engineering and administrative costs involved in the transfer process.

The intent of the above criteria is to provide a reasonable and safe access to abutting property owners to the main reservoir body. Properties isolated from the main reservoir body by public roads would not qualify for residential access under these criteria.

Attachment A in Contract No. TV-60000A, frequently referred to this document as the Tellico Reservoir 1982 land use plan map (Exhibit 1, located in map pocket), clearly identifies how the land is to be used under the existing land plan. The existing Tellico land use plan divides the TVA land and former TVA land into three categories:

- TVA-Retained Land – Tellico Project land acquired by TVA in the name of the United States for the Tellico Project lying above the 820 maximum shoreline contour (msc) which is retained by TVA to be managed, used, or disposed of in accordance with Contract No. TV-60000A. This land is suballocated to Cultural/Public Use/Open Space Areas, Industrial Development Areas, and Natural/Wildlife Areas. (Approximately 9959 acres.)

- Easement Land – Portions of the transferred land which are designated for Public Use Recreation purposes or to the Eastern Band of the Cherokee Indians. (Approximately 591 acres.)

- Transferred Land – All lands acquired by TVA in the name of the United States for the Tellico Project lying above the 820-msc and designated as either developed land or easement land except for the project land adjacent to Watts Bar Reservoir (approximately 202 acres) where the structure profile is 750-msl rather than the 820-msl. With the exception of the easement land, transferred land is no longer owned by TVA. This land is suballocated to Private Residential Areas, Industrial Development Areas, Cultural/Public Use/Open Space Areas and Commercial Recreation Areas. (Approximately 10,949 acres.)

Table 2.2.1-1 summarizes the 1982 land use plan designation categories.

Table 2.2.1-1 Tellico Reservoir Existing Plan Land Use Designation Definitions	
Plan Designations	**Definition**
RETAINED LAND	
TVA Dam Reservation	Land that is 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 reservations.
Cultural/Public Use/Open Space Areas	Tellico Project land which is either to be retained by TVA or to be transferred to TRDA (see "transferred land," below) and managed so as to protect and enhance the cultural resources and scenic amenities of the project area; provide a buffer between incompatible or contrasting land uses; provide areas for passive or informal recreational purposes such as primitive camping, picnicking, hiking, fishing, and hunting; and permit complementary agriculture, forestry, and wildlife utilization of this land. Where cultural or scenic resources exist, appropriate activities may also be conducted to ensure that these resources are developed, interpreted, and protected and public access is accordingly limited or controlled.
Industrial Development Areas	Tellico Project land which is either retained by TVA or transferred to TRDA (see "transferred land," below) and used for manufacturing, storage, warehousing, ports, and shipping buildings and facilities, and other related activities which serve to directly encourage the creation of jobs in the project area.
Natural/Wildlife Areas	Tellico Project land retained by TVA and managed so as to protect and enhance the natural qualities of the area around the reservoir that provide important habitat for resident and migratory wildlife; provide areas for passive or informal recreational purposes such as primitive camping, picnicking, hiking, fishing, and hunting; and permit complementary agriculture and forestry utilization of this land.
EASEMENT LAND	
Public Use Recreation Areas	Tellico Project land which is either transferred to TRDA, adjoining county(ies), or retained by TVA and used solely for Public Use Recreation purposes.
State Recreation Areas	A Grant of Easement from TVA to the Tennessee Department of Conservation for purposes of public recreation, historic and scenic preservation, and wildlife management for the benefit and enjoyment of the general public.
Eastern Band of the Cherokee Indians Memorial Site	A Grant of Easement from TVA to the Eastern Band of the Cherokee Indians which provides, among other things, for cooperation in the development of historical and cultural resources in the Tellico Reservoir Project area through a series of projects designed to memorialize the American Indian presence in the project area.
TRANSFERRED LAND	
Private Residential Areas	Tellico Project land that is transferred to TRDA with the designated purpose of Residential Access.
Commercial Recreation Areas	Tellico Project land that is transferred to TRDA with the designated purpose of Commercial Recreation.
Other	Other Development Land types—Cultural/Public Use/Open Space Areas; Industrial Development (described above)–can also be transferred.

Table 2.2.1-2 summarizes the 1982 Tellico land use plan designation of the retained land tracts on Tellico Reservoir. These acreages correspond to those on the Tellico Reservoir 1982 land use plan map (Exhibit 1).

Table 2.2.1-2 Allocation of Land in the 1982 Tellico Reservoir Land Use Plan (Alternative A)*

Land Use Category	Acres	Percent of Total Land
TVA Dam Reservation	665.9	5.3%
Natural/Wildlife Areas	1,912.3	15.1%
Cultural/Public Use/Open Space Areas	7,679.9	60.7%
Industrial Development Areas	367.0	2.9%
Private Residential Areas	423.6	3.4%
Commercial Recreation Areas	41.7	.3%
Public Use Recreation Areas	484.9	3.8%
State Recreation Areas	901.8	7.1%
Eastern Band of the Cherokee Indians Memorial Site	109.6	.9%
Highway	56.1	.4%
Total	12,642.8	100.0%

*The sum of individual percentages may differ from the total due to rounding.

2.2.2 Alternative B – Allocation Alternative

Alternative B, the proposed Plan, was developed using information obtained from the public, existing and newly-collected field data both on land conditions and resources, and technical knowledge from TVA staff. It would allocate most TVA land into categories that emphasize sensitive resource management (preservation and enhancement of wetlands, biodiversity, and archaeological and historic resources) and natural resource conservation.

Public recreation projects that have been conceptually proposed by various agencies for Tellico Reservoir are presented under Alternative B. However, each of these proposals could be considered under either alternative. If they become formal proposals, the compatibility of the proposal with land use allocations or zoning would be considered, and each, individual proposal would be subjected to the appropriate level of additional environmental review. A minimal amount of additional development would be proposed to accommodate the following proposals:

- **The Eastern Band of the Cherokee Indians Development** - This 38-acre tract of TVA land (Parcel 94) is located in Vonore between Highway 411 and the Tellico River near the merging point of the Little Tennessee and Tellico Rivers. As conceptually proposed by the Eastern Band of the Cherokee Indians, this development could include, but not be limited to, a hotel, a

conference center, restaurants/lounges, boat docking facilities, fishing/marine concessions, walking trails, and general parking. Some of the revenues generated from this development would be used to support the operation of the Sequoyah Birthplace Museum. Under Alternative A this land is both Cultural/Public Use/Open Space Areas (25 acres) and Public Use Recreation Areas (13 acres). Under Alternative B, these parcels would be zoned Recreation.

- **Greenway**. The Tennessee Department of Environment and Conservation (TDEC) has asked TVA to consider including a linear park or Greenway along the right descending bank of Tellico Reservoir from Lotterdale Cove downstream to the recreation parcel upstream of Lower Jackson Bend. Because no formal proposal has been submitted by the state, the plan is conceptual rather than specific. The concept allows for access points, parking lots, restrooms, and/or picnic areas connected by a trail system that could be designed and built in stages. The exact locations of the proposed amenities have not been determined. The overall objective would be to connect Lotterdale Cove to Lower Jackson Bend while maintaining as much of the natural surroundings as possible. Under Alternative A, this land is designated as Cultural/Public Use/Open Space Areas. Under Alternative B, if the State proposed a Greenway approximately 10 miles long and up to 100 feet wide on existing public lands (tread with buffer), then approximately 121 acres within Parcels 8, 9, 10, 11, and 15 would be affected by the Greenway. The affected parcels would remain classified in Zones 3, 4, and 6.

- **Coytee Springs Recreation Area**. A new recreation site is proposed by TVA in the Coytee Springs area (Parcel 10). The amenities proposed for the site, including picnic areas, walking trails, and greenway entry/exit points, would be for day use only. The upstream portion of the site currently receives heavy informal recreation for fishing and camping. The proposed Greenway would pass through this recreation area. Under Alternative A, this land is designated as Cultural/Public Use/Open Space Areas. Coytee Springs Recreation Area would affect 84 acres and 1.1 miles of shoreline. Under Alternative B, this property would be classified in Zone 6.

TVA proposes to develop a **River Corridor** along the upper Tellico River portion of the reservoir. This is linear greenspace along both streambanks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities.

The purpose of a River Corridor is to afford opportunities for the recreating public to enjoy natural settings in a riverine environment. Portions of the Tellico River have these characteristics and are worth preserving for future generations. The upper Tellico River is predominantly undeveloped, with some exceptions where subdivisions have sprouted or adjoining private land owners have developed private water use facilities. A portion of the Tellico River offers free-flowing

water which transitions to a lake environment and flat water. Much of the river is not navigable by large boats due to inadequate year-round water depth or underwater obstructions.

A portion of Tellico River from below Sloan Bridge upstream to the end of TVA land and land rights for a distance of about 7.7 miles is proposed for use as a River Corridor. The River Corridor includes the upstream part of Parcel 131 and Parcels 134, 135, 136, 137, 138, and 139. The River Corridor, not including islands, would affect 216 acres of TVA land and 20.6 miles of shoreline. The River Corridor designation includes specific guidelines for private water and land use requests from landowners with ingress/egress rights along the shoreline. The purpose of these guidelines is to allow a qualified land owner to have a private water use facility while ensuring the protection of the natural settings along the shoreline. Once a landowner's rights for a water use facility have been verified, and the usual 26a compliance checks are completed, additional proposed guidelines for River Corridor water use facilities would apply (see Appendix B-1)

Within the River Corridor at approximate River Mile 18.5 along the left descending bank of the Tellico River is a small tract (3 acres) of TVA land (Parcel 139) that is a proposed recreation site. Due to its location at the mouth of Big Creek and accessibility by existing road, this parcel is well suited as a recreation area that offers an opportunity for canoe and other types of light boat access. The TWRA has expressed an interest in managing the area. Once developed, this access point would include the basic river access facilities including steps or a small ramp and parking as appropriate.

TVA considered a wide range of possible land uses in the development of this Plan. Each parcel of land was reviewed to determine its physical capability for supporting certain uses, suitability of supporting these uses, and public needs. Based on this information, the Tellico Planning Team (see Appendix B-2 for a list of team members) allocated land parcels to one of seven planning zones defined in Table 2.2.2-1.

Table 2.2.2-1 Planned Land Use Zone Definitions

Zone		Definition
1	**Non-TVA Shoreland**	Shoreland located above summer operating range that TVA does not own in fee or land never purchased by TVA. TVA is not allocating private or other non-TVA land. This category is provided to assist in comprehensive evaluation of potential environmental impacts of TVA's allocation decisions. Non-TVA shoreline includes: • ***Flowage easement land***—Privately- or publicly-owned land where TVA has purchased the right to flood and/or limit structures. Flowage easement land is generally purchased to a contour elevation. Since this land is subject to TVA's Section 26a permitting requirements, the Shoreline Management Policy (SMP) guidelines discussed in the definition of Zone 7 would apply to flowage easement land fronting private residential development. • ***Privately-owned reservoir land***—Including, but not limited to, Residential, Industrial/Commercial, and Agricultural.

Table 2.2.2-1 Planned Land Use Zone Definitions

Zone		Definition
2	**TVA Project Operations**	TVA reservoir land currently used for TVA operations and public works projects includes: • ***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, transmission facilities, and rights-of-way. • ***Dam reservation land***—Areas used for developed and dispersed recreation, maintenance facilities, Watershed Team 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 day boards and beacons***—Areas with structures placed on the shoreline to facilitate navigation. • ***Public works projects***—Includes fire halls, public water intakes, public treatment plants, etc. (These projects are placed in this category as a matter of convenience and may not relate specifically to TVA projects.) • ***Highways adjusted due to the development of the Tellico Project***—Includes highways that were relocated or elevated to a location or an elevation that would allow continued use during normal flood events. • ***Land planned for any of the above uses in the future.***
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. 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 archeological resources***. • TVA lands with ***sites/structures listed on or eligible for listing on the National Register of Historic Places***. • ***Wetlands***—Aquatic bed, emergent, forested, and scrub-shrub wetlands as defined by TVA. • ***TVA land under easement, lease, or license to other agencies/individuals for resource protection purposes***. • ***TVA land fronting land owned by other agencies/individuals*** for resource protection purposes. • ***Habitat protection areas***—Areas managed by TVA to protect populations of species identified as threatened or endangered by the USFWS, state-listed species, and any unusual or exemplary biological communities/ geological features. • ***Ecological study areas***—Designated areas that are 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.

Table 2.2.2-1 Planned Land Use Zone Definitions

Zone		Definition
		• ***Small wild areas***—Areas 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—***A linear greenspace along both streambanks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities. 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 land. • ***Other sensitive ecological areas***—Examples include heron rookeries, nest colonies, and unique cave or karst formations. • ***Land planned for any of the above uses in the future.***
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, resource management, wildlife observation, and camping on undeveloped sites. Areas included are: • ***TVA land under easement, lease, or license*** to other agencies for wildlife or forest management purposes. • ***TVA land fronting land owned by other agencies*** for wildlife or forest management purposes. • ***TVA land*** managed for wildlife or forest management projects. • ***Informal recreation areas*** maintained for passive, dispersed recreational 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 backlying property that are managed for wildlife, water quality, or visual qualities. Such riparian zones contribute to the ecology of the reservoir by providing food and habitat for diverse populations of plants and animals normally found in these areas. Trees and understory vegetation protect water quality by filtering nutrients, sediments, and other pollutants from runoff before they reach the lake. They also provide shade, cover, and a food source for fish. • ***Wildlife observation areas***—Areas with unique concentrations of easily observed wildlife that are managed as public wildlife observation areas. • ***River corridor without sensitive resources present***—A river corridor is a linear greenspace along both streambanks 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 of 10 acres or less.*** • ***Land planned for any of the above uses in the future.***

Table 2.2.2-1 Planned Land Use Zone Definitions

Zone		Definition
5	**Industrial/ Commercial Development**	Land managed for economic development purposes. Areas included are: • ***TVA land under easement, lease, or license to other agencies/individuals*** for industrial or commercial purposes. • ***TVA land fronting land owned by other agencies/individuals*** for industrial or commercial purposes. • ***Sites planned for future industrial use.*** Types of development that can occur on this land are: • ***Business parks***—TVA waterfront land which supports industrial or commercial development. • ***Industrial access***—Access to the waterfront by backlying 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 which have both off-shore and on-shore 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. (Commercial recreation uses, such as marinas and campgrounds, are included in Zone 6.)
6	**Recreation**	All reservoir land managed for concentrated, recreational activities that require capital improvement and maintenance, including: • ***TVA land under easement, lease, or license to other agencies/individuals*** for recreational purposes. • ***TVA land fronting land owned by other agencies/individuals*** for recreational purposes. • ***TVA land developed for recreational purposes*** such as campgrounds, and day-use areas. • ***Land planned for any of the above uses in the future.*** Types of development that can occur on this land are: • ***Commercial recreation***, e.g., marinas, boat docks, resorts, campgrounds, and golf courses. • ***Public recreation***, e.g., local, state, and federal parks and recreation areas. • ***Greenways,*** linear parks located along natural features such as lakes or ridges, or along man-made features including abandoned railways or utility rights-of-way, which link people and resources together. • ***Water access sites***, e.g., boat ramps, courtesy piers, canoe access, fishing piers, vehicle parking areas, picnic areas, trails, toilet facilities, and information kiosks.

Table 2.2.2-1 Planned Land Use Zone Definitions

Zone		Definition
7	**Residential Access**	TVA-owned lands where Section 26a applications and other land use approvals for residential shoreline alterations are considered. Requests for residential shoreline alterations are considered on parcels identified in this zone where such use was previously considered and where the proposed use would not conflict with the interests of the general public. As provided for in the SMP, residential access would be divided into three categories based on the presence of sensitive ecological resources. The categories are: (1) Shoreline Protection* for shoreline segments that support sensitive ecological resources, such as federally-listed threatened or endangered species, high priority state-listed species, wetlands with high function and value, archaeological or historical sites of national significance, or which contain navigation restrictions; (2) Residential Mitigation for shoreline segments where resource conditions or navigation conditions would require special analysis and perhaps specific mitigation measures, or where additional data are needed; and (3) Managed Residential where no sensitive resources are known to exist. Types of development/management that can occur 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. • ***Residential access corridors***, e.g., pathways, wooden steps, walkways, or mulched paths which can include portable picnic tables and utility lines. • ***Shoreline stabilization***, e.g., bioengineering, riprap and gabions, and retaining walls. • ***Shoreline vegetation management*** on TVA-owned residential access shoreland. • ***Conservation easements*** for protection of the shoreline. • ***Other activities***, e.g., fill, excavation, grading, etc. * *Docks and other shoreline development are not permitted on land categorized as Shoreline Protection.*

In accord with the TVA Shoreline Management Policy (TVA, 1998a), TVA committed to categorize the residential shoreline of Tellico Reservoir based on data collected during field surveys. A resource inventory has been conducted for sensitive species and their habitats, archaeological resources, and wetlands along Tellico Reservoir's residential shoreline.

A basic premise of the reservoir land planning process is that land currently committed to a specific use would be allocated to that current use unless there is an overriding need to change the use. Commitments include: transfers, leases, licenses, contracts, TVA projects such as the Dam Reservation or power lines, outstanding landrights, or TVA-developed recreation areas. Agricultural licenses would be excluded because they are considered to be an interim use of TVA land. For planning purposes, a total of 6103 acres of Tellico Reservoir lands are considered committed. Table 2.2.2-2 summarizes the allocation of committed land on Tellico Reservoir. Individual committed parcels are listed in Volume 2.

Table 2.2.2-2 Summary of Allocation of Committed Land on Tellico Reservoir		
Number of Parcels	**Land Use Zones**	**Acres**
2	2 - Project Operations	619.0
3	3 - Sensitive Resource Management	17.0
7	4 - Natural Resource Conservation	3228.7
6	5 - Industrial/Commercial Development	313.2
24	6 - Recreation	1529.1
9	7 - Residential Access	396.0
	Total	**6103.0**

The balance of Tellico Reservoir (6540 acres) was considered "plannable land," that is land that was not previously committed. Field data were collected on all unplanned land by technical specialists such as archaeologists, historic architects, wetland specialists, visual specialists, and biologists to identify all areas containing sensitive resources.

A key planning assumption of Alternative B was that areas identified as having sensitive resources would be protected by being placed into Zone 3, Sensitive Resource Management. However, if parcels with existing commitments (leases, licenses, contracts, etc.) contain sensitive resources, those parcels would remain zoned for the committed use. In addition, an environmental review would be needed prior to future activities that would impact the identified sensitive resources.

A review of all plannable land was conducted by TVA. Specialists were asked to rate each parcel as high, medium, or low by a given set of use-specific criteria (see Appendix B-3 for rating criteria) and to rank the parcels as high, medium, or low depending on customer needs. Customer needs were identified during the scoping process (see Appendix A-1) to help determine the most suitable use for the land. TVA power, navigation, natural resource stewardship, recreation, and economic development personnel rated and ranked the parcels as shown in Appendix B-4.

After the ranking exercise, the planning team and technical specialists met to allocate the plannable or uncommitted parcels to one of the six planning zones. Using resource maps and all of the information collected during the planning process including public input, the capability and suitability of each parcel was discussed. Allocation decisions were made by consensus.

These allocations were used to prepare the Plan (see Appendix A-1). The Plan contains an explanation of the planning process, an overview of the reservoir's history and development, a description of each parcel, and maps of the proposed land plan. Table 2.2.2-3 summarizes the number of parcels allocated to each of

the six zones. The proposed land use allocation map for Alternative B (Exhibit 2 located in map pocket) shows the location of each parcel.

Land proposed by TVA to be allocated under this plan has been placed in Zones 2-7. Land already transferred in fee to TRDA or other entity is considered non-plannable.

Table 2.2.2-3 Summary of Proposed Land Use Allocations for Alternative B

Number of Parcels	Proposed Land Allocations	Acres	Percent of Total land
3	2 - Project Operations	635.1	5.0%
27	3 - Sensitive Resource Management	2,184.5	17.3%
41	4 - Natural Resource Conservation	7,136.5	56.4%
8	5 - Industrial/Commercial Development	331.4	2.6%
33	6 - Recreation	1,803.5	14.3%
27	7 - Residential Access	551.8	4.4%
	Total	**12,642.8**	**100.0%**

2.3 Alternatives Eliminated From Consideration

The January 14, 1999, Notice of Intent to prepare the DEIS described three alternative plans. Two of these constitute Alternatives A and B, described above. The third alternative was similar to Alternative B, except that it would have allocated 853 acres of TVA-retained land on the downstream east bank of the reservoir for a commercial recreation and residential development proposed by Tellico Landing, Inc. (TLI). The TLI development would have also included 217 acres of TRDA land and backlying private lands. The TVA Board announced on March 15, 1999, that it would no longer consider the TLI proposal affecting TVA-retained properties. This third alternative has, therefore, been eliminated from consideration in this EIS.

More recently, Tellico Landing LLC has announced its intention to develop a scaled-back commercial recreation facility on the TRDA-owned Lower Jackson Bend tract and backlying private lands. Because the TRDA land is currently zoned for Commercial Recreation, this development would not require TVA approval. TVA approval would, however, be required for any associated water access facilities such as a boat launching ramp or dock. As of early June, 2000, TVA had not received any plans for this facility.

2.4 Comparison of Alternatives

Direct comparison of any given land use is difficult since the earlier land planning designations and the planning zones are not the same. However, Table 2.4-1 presents the balance of TVA land on the Tellico Reservoir when comparing the

two alternatives considered in this EIS. Under Alternative A, the designations including acreage/percentage data are shown as currently planned. Alternative B proposes to allocate 6540 acres of the total 12,643 acres retained by TVA that are not inundated by the reservoir. The remaining 6103 acres are those lands previously committed but retained under TVA ownership. Based upon the new planning zones being applied in recent reservoir land management planning, each of these current designations of Alternative A is shown as it would be zoned in the Alternative B land Plan. For example, the current definition for lands within Cultural/Public Use/Open Space Areas does not specifically match any one Alternative B zone description. Under the current plan, Cultural/Public Use/Open Space Areas has 7680 acres, which under Alternative B would be divided into five zones. The majority of TVA property would be allocated to Zone 3 (Sensitive Resource Management) and Zone 4 (Natural Resource Conservation).

Dispersed informal recreational activities commonly conducted on areas designated under Public Recreation Areas, Cultural/Public Use/Open Space Areas, or Natural/Wildlife Areas of Alternative A may also be conducted in Zones 3 and 4 of Alternative B. Areas that are developed or may have future recreational development are allocated to Zone 6 (Recreation) in the Plan.

A major change from existing land designations is the creation of Zone 3 (Sensitive Resource Management). Land containing sensitive resources such as sensitive species, archaeological resources, significant visual resources, wetlands, and others is allocated to this zone. Under Alternative A, the resources identified for protection would be protected by individual environmental reviews of specific land use proposals. However, allocation of these resources to Zone 3 in Alternative B allows the protection of the sensitive resource to be the overriding objective for the management of a particular parcel of land, as well as providing an additional tool to better manage the potential for cumulative effects which might occur to a sensitive resource.

Table 2.4-1 Comparison of Land Use Under Alternatives A and B*

Alternative A (Current Allocation)			Alternative B		
Description	**Acres**	**Percent**	**Zone**	**Acres**	**Percent**
Cultural/Public Use/Open Areas	7,679.9	60.8%	Zone 3	1,621.3	12.8%
			Zone 4	5,672.4	44.9%
			Zone 5	18.2	0.1%
			Zone 6	246.5	1.9%
			Zone 7	121.5	1.0%
			Total	7,679.9	60.8%

Table 2.4-1 Comparison of Land Use Under Alternatives A and B*

Alternative A (Current Allocation)			Alternative B		
Description	**Acres**	**Percent**	**Zone**	**Acres**	**Percent**
Natural/Wildlife Areas	1,912.3	15.2%	Zone 3	556.6	4.4%
			Zone 4	1,260.1	10.0%
			Zone 6	12.2	0.1%
			Zone 7	83.4	0.7%
			Total	1,912.3	15.2%
Commercial Recreation Areas	41.7	0.3%	Zone 6	41.7	0.3%
			Total	41.7	0.3%
Public Use Recreation Areas	484.9	3.8%	Zone 4	2.8	<0.1%
			Zone 6	482.1	3.8%
			Total	484.9	3.8%
State Recreation Areas	901.8	7.1%	Zone 3	1.3	<0.1%
			Zone 6	900.5	7.1%
			Total	901.8	7.1%
Eastern Band of the Cherokee Indian Sites	109.6	0.9%	Zone 4	0.2	<0.1%
			Zone 6	109.4	0.9%
			Total	109.6	0.9%
TVA Dam Reservation	665.9	5.2%	Zone 2	614.3	4.8%
			Zone 4	48.5	0.4%
			Zone 7	3.1	<0.1%
			Total	665.9	5.2%
Highway	56.1	0.3%	Zone 2	20.9	0.2%
			Zone 3	0.4	<0.1%
			Zone 4	18.2	0.1%
			Zone 5	16.6	0.1%
			Total	56.1	0.3%
Private Residential Areas	423.6	3.3%	Zone 3	4.9	<0.1%
			Zone 4	63.7	0.5%
			Zone 6	11.1	0.1%
			Zone 7	343.9	2.7%
			Total	423.6	3.3%
Industrial Development Areas	367.0	2.8%	Zone 4	70.5	0.4%
			Zone 5	296.6	2.4%
			Total	367.0	2.8%
Total	**12,642.8**	**100%**		**12,642.8**	**100%**

*The sum of individual percentages may differ from the total due to rounding.

Most of the land currently committed to a specific use would be allocated to that current use under either Alternative A or B. As reflected in Table 2.4-1 and parcel descriptions included in the Plan, the most substantive changes from the current land use allocations to the new system of zones would be as follows:

- Reallocation of about 389 acres from Cultural/Public Use/Open Space Areas to Recreation. This acreage includes approximately 38 acres needed to support a renewed proposal by the Eastern Band of the Cherokee Indians for commercial recreation development (possible hotel/conference/resort) near Highway 411 in Vonore at the mouth of the Tellico River. Proceeds from this activity would be used to support the continued operation of the Sequoyah Birthplace Museum. The proposed allocation for the remaining acreage is as follows: 140 acres to Commercial Recreation, for which there are no formal proposals, and 211 acres to Public Recreation.
- Clearer definition of lands where the adjoining property owners currently qualify for private water use facilities (i.e., 122 acres from Cultural/Public Use/Open Space Areas, 3 acres from TVA Dam Reservation, and 83 acres from Natural/Wildlife Areas). TVA did retain fee interest below the 820-foot contour on Tellico Reservoir. The zones proposed under Alternative B would simply recognize that the marginal strip lands (those below 820-foot contour) would be classified to reflect the rights of the existing backlying property owners. Lake access rights are governed by the deed conveying the affected backlying property and by Contract No. TV-60000A with TRDA. Conversely, 80 acres affected by sensitive/protected resources and/or physical constraints that are unsuitable for such use have been moved from the Private Residential designation to more protective Zones 3, 4, or 6.

Alternative A would continue the use of the 1982 land use plan as described in Section 2.2.1. Selection of this alternative could result in some reduction in potential long-term benefits on Tellico Reservoir. Alternative B would allocate land into categories that emphasize sensitive resource management and natural resource conservation as described in Section 2.2.2. Selection of this alternative would be beneficial to public lands and would protect current resource functions and values. However, as described in individual resource evaluations in Chapter 3 and summarized in Table 2.4-2, impacts of either alternative would be insignificant.

2.5 The Preferred Alternative

The Preferred Alternative is Alternative B. This alternative formulates a new and comprehensive Reservoir Land Management Plan for 139 parcels of TVA land on Tellico Reservoir. This Plan grandfathers previous land use commitments and allocates uncommitted TVA land into zones that allow for a balance of development and conservation.

Table 2.4-2 Comparison of Potential Environmental Effects by Alternative

Section	Resource Area	Alternative A	Alternative B
3.1	Visual Resources	A general cumulative decline in undeveloped scenic/aesthetic resources is expected as residential and commercial development increase. The 1982 land use plan does not have a designation for scenic/aesthetic protection of TVA held tracts. Visual impacts of development would continue to be evaluated prior to issuance of permits.	Generally has a beneficial effect on visual resources. Land with distinctive visual characteristics or outstanding scenic qualities would be placed in the Sensitive Resources Management Zone or the Natural Resource Conservation Zone (Zones 3 and 4). Cumulative effects to visual resources would be less, as compared to Alternative A. Visual impacts of development would continue to be evaluated prior to issuance of permits.
3.2	Cultural Resources	Surveys of about 20 percent of the plan lands identified 410 archaeological resources. Two-thirds of these resources are on Cultural/Public Use/Open Space Areas and Natural/Wildlife Areas lands where activities resulting in potential impacts are unlikely. All activities resulting in potential impacts to cultural resources would be evaluated under the Phased Identification and Evaluation Procedure, set forth in regulations of the Advisory Council on Historic Preservation. The activities would be approved, mitigated, or denied according to the significance of the resource. If mitigation is required, appropriate archaeological investigation will be necessary and potentially impacted resources will be properly recorded and removed.	About 63 percent of the 410 identified archaeological resources are on lands that would be in Zones 3 and 4, affording them a high degree of protection. All activities resulting in potential impacts to cultural resources would be evaluated under the Phased Identification and Evaluation Procedure, set forth in regulations of the Advisory Council on Historic Preservation. A Memorandum of Agreement (MOA) has been prepared and executed with the Tennessee State Historic Preservation Officer (SHPO) for identification, evaluation, and treatment of historic properties that are eligible for inclusion in the National Register of Historic Places (NRHP).
3.3	Threatened and Endangered Species	Plants - Because no populations of federally-listed plants are known to occur on Tellico Reservoir lands, no impacts to such species are expected. Populations of listed species that might be discovered in the future would continue to be considered during TVA environmental review of individual projects and protective or mitigative measures would be implemented as required by law and TVA policy. Therefore, no direct impacts to rare plants are anticipated.	Plants - Because no populations of federally-listed plants are known to occur on Tellico Reservoir lands, no impacts to such species are expected. TVA environmental reviews would address direct threats to state- and federally-listed plants. The planning zones established would protect ecologically-sensitive parcels by acting as a “first filter” in the early stages of project planning, thereby minimizing conflicting land use requests.

Table 2.4-2 Comparison of Potential Environmental Effects by Alternative			
Section	**Resource Area**	**Alternative A**	**Alternative B**
	Threatened and Endangered Species (cont.)	Terrestrial Animals - Under the existing plan, several tracts of excellent wildlife habitat are designated as Cultural or Public areas. Effects to populations of terrestrial threatened and endangered species would be considered during TVA environmental reviews associated with specific projects; therefore, no significant adverse impacts are expected. Although this process would protect most populations of rare terrestrial animals, the ability to address cumulative impacts to rare terrestrial animals would be limited.	Terrestrial Animals - Specific land use categories have been designated to protect sensitive terrestrial animals and their habitats and sensitive ecological areas. Cumulative impacts to rare species would be better addressed because of the comprehensive nature of the land planning process for Tellico Reservoir Lands. No significant impacts are anticipated.
		Aquatic Animals - Environmental review procedures, including compliance with the Endangered Species Act, would assure that TVA actions would not likely adversely affect the habitat of rare species. However, while TVA would protect sensitive species during individual reviews, there is some potential for indirect or cumulative impacts.	Aquatic Animals - Environmental review procedures, including compliance with the Endangered Species Act, would assure that TVA actions would not likely adversely affect the habitat of rare species. In addition, Alternative B protects several large areas containing wetlands and other sensitive terrestrial habitats. Many of these areas will act as riparian buffer zones and, thus, will have an indirect but positive effect on aquatic habitat quality. Also, large lowland areas protected for cultural concerns may provide additional protection to aquatic habitats. Therefore, if any sensitive aquatic species are present, Alternative B will afford these species and/or habitat greater protection than the 1982 land use plan.

Table 2.4-2 Comparison of Potential Environmental Effects by Alternative			
Section	**Resource Area**	**Alternative A**	**Alternative B**
3.4	Terrestrial Ecology and Other Significant Natural Features	A large portion of TVA's retained land could remain undeveloped and managed indefinitely primarily for informal recreation. However, future land use actions driven by TVA, TRDA, or other public or private entities, could result in substantial impacts to terrestrial ecological resources on a localized basis. Cumulative impacts under this alternative would be considered insignificant on a regional basis.	Alternative B would provide for enhanced management and protection of terrestrial ecological resources on Tellico Reservoir properties. This would result from a longer commitment of certain land parcels to specific designations such as Sensitive Resource Management and Natural Resource Conservation. Also, the subsequent development of unit management plans would maintain and enhance natural biological diversity on these parcels. Selection of this alternative would result in insignificant impacts on terrestrial ecological resources on a regional and cumulative basis, and, consequently, improved future protection and management of terrestrial resources, wildlife habitat, and diversity on a reservoir-wide basis.
3.5	Wetlands/Riparian Ecology	Environmental review procedures would ensure insignificant impacts on wetlands and associated function and values, as well as wildlife dependent upon wetlands on a regional or subregional basis. Under Alternative A, wetland areas would most likely remain largely unchanged, although some emergent wetlands may gradually mature to shrub/scrub wetlands. Selection of Alternative A would have an insignificant impact on wetlands and associated functions and values on a regional or subregional basis.	Selection of Alternative B would provide a beneficial effect to wetland resources on TVA lands and best protect current wetlands' functions and values. Wetlands would be managed to protect and/or enhance the hydrology, soils, and vegetation of each wetland system to improve overall functions and values. Riparian communities would be managed to allow the natural development of native vegetation or restored through bioengineering where shoreline erosion is impacting these areas. Impacts to wildlife dependent on wetlands would likely be beneficial because of the long-term commitment of additional lands for natural resource protection and enhancement.

Table 2.4-2 Comparison of Potential Environmental Effects by Alternative			
Section	**Resource Area**	**Alternative A**	**Alternative B**
3.6	Recreation	Continuing with this alternative and its associated land designations would preclude comprehensive public input and application of broad public values. The cumulative effect of selecting this alternative could be less than optimal allocation of lands for recreation and some reduction in potential long-term recreational benefits on Tellico Reservoir.	This comprehensively addresses the existing physical characteristics of land being planned around Tellico Reservoir, current recreational use patterns, public input, anticipated recreational needs, and public values pertaining to recreational use of this property. Selection of this alternative would result in a slight increase in lands allocated for developed recreation and better integration of recreation with other reservoir land values. Informal recreation should not be affected.
3.7	Water Quality	Under this alternative, future land use and development is less restricted and has greater potential for incremental adverse effects on water quality from an increase in shoreline development (e.g., increased soil erosion, turbidity, levels of substances toxic to aquatic life, bacteriological content, and further increases in nutrient loading). TVA's current permitting process and best management practices would minimize impacts associated with development to insignificant.	Alternative B provides better opportunity to protect water quality by designating more parcels to Sensitive Resource Management or Natural Resource Conservation (Zones 3 and 4, respectively). This alternative limits development and ensures that other activities such as developed recreational use, resource management, or other conservation uses would be conducted with protection of natural resources as an objective. Allocation of other parcels for future developed recreational activities or other public access/use areas would allow TVA control over development to minimize adverse impacts. Direct, indirect, and cumulative impacts to water quality would be minimized and insignificant.

Table 2.4-2 Comparison of Potential Environmental Effects by Alternative			
Section	**Resource Area**	**Alternative A**	**Alternative B**
3.8	Aquatic Ecology	There would likely be some minor degradation of aquatic habitats associated with continued development along the reservoir shoreline. Under this alternative, the quality of aquatic habitat (as evidenced by Shoreline Aquatic Habitat Index [SAHI] scores) would likely remain much like existing conditions. Few tracts of TVA property, however, are designated specifically for protection of sensitive resources, and the extent of protection of natural resources in other designations (such as the Cultural/Public Use/Open Space Areas) is vague. Although protection of the natural reservoir shoreline may be undertaken as a secondary consideration on tracts of TVA land designated for various uses, natural resource protection or conservation, and, consequently, impacts to aquatic communities may not be a primary consideration when land use decisions are made affecting those tracts.	Reservoir-wide quality of aquatic nearshore habitat would remain unchanged (as evidenced by SAHI scores). This alternative would provide a better opportunity to protect or enhance aquatic habitats by identifying sensitive resource management or conservation as the designated use on some tracts now having general designations such as Cultural/Public Use/Open Space Areas. Any of the proposed uses of Zone 3 or 4 lands would allow for the protection or enhancement of aquatic habitats by preserving a natural shoreline condition offering a variety of cover types. Some development of the reservoir shoreline is likely to continue under either alternative. However, Alternative B affords additional protection to aquatic resources near some Zone 7 lands by designating some adjacent shoreline as Zone 4, which will allow preservation of a more natural shoreline condition in some restricted areas of residential development.
3.9	Socioeconomics	This alternative currently classifies approximately 371 acres of land for industrial use. Although some of this land may not in fact be available for such use due to the presence of sensitive resources or due to its use for enhancement of natural resources, it would increase the range of opportunities available to industrial developers in the area. However, the impact on jobs and income in the local economy is uncertain. About 1400 acres of land are classified for recreation but would not likely result in an important increase in jobs and income in the area. Construction of homes and rentals would have a small impact on the local economy.	Alternative B, by allocating uncommitted TVA land, decreases the emphasis on commercial, industrial, and residential uses and increases the emphasis on sensitive resource protection and natural resource conservation. This change in emphasis might lead to less development on the shoreline. However, this change probably would not have an important impact on the local economy since much of this activity likely would occur nearby instead.

Table 2.4-2 Comparison of Potential Environmental Effects by Alternative			
Section	**Resource Area**	**Alternative A**	**Alternative B**
3.10	Navigation	All safety landings would continue to be available for use by the towing industry, and there would be no potential effects on commercial navigation.	There would be no additional effects to commercial navigation from this alternative. The land use designation for the shoreline containing the four safety landing tracts would have little or no impact on navigation.
3.11	Prime Farmland	Present amounts of prime farmland unavailable due to land use allocations (10.7 percent) would remain the same under the current plan. As proposals for future development are submitted to the agency over time, the assessment of impacts to prime farmland would be conducted on a case-by-case basis. Prior to future conversion of this land to nonagricultural uses, a Farmland Conservation Impact Rating (USDA-NRCS Form AD-1006) would be required.	Slight, insignificant decrease in the amount of prime farmland available (15.3 percent of prime farmland on TVA lands). Impacts to prime farmland soils will be minimal under the proposals for both greenways and the development near Hwy. 411 due to the very small acreage of prime farmland soils within each area. The proposed River Corridor would also have minimal impacts to prime farmlands.
3.12 Other issues			
3.12.1	Floodplains	Impacts to floodplain values would be insignificant. The allocation, development, and/or management of properties would be made on a case-by-case basis, and evaluations would be done individually to ensure compliance with Executive Order 11988. Potential development would generally consist of water use facilities and other repetitive actions in the floodplain that should result in minor floodplain impacts.	Impacts to floodplain values would be insignificant. However, potential adverse impacts to natural and beneficial floodplain values would be less than those under Alternative A because a substantial portion of the available land would be allocated for resource management and conservation activities. Little development which could affect floodplain values would occur on these Zone 3 and Zone 4 lands.
3.12.2	Noise	Activities on lands allocated to Dam Reservation, Cultural/Public Use/Open Space Areas, Natural/Wildlife Areas, or retained lands are unlikely to exceed community noise standards. TVA would review development plans to ensure that no significant noise-emitting facilities are included, and that construction noise controls are in place.	Same as Alternative A.
3.12.3	Air Quality	There would be insignificant effects on air quality.	Same as Alternative A.

3. AFFECTED ENVIRONMENT AND POTENTIAL EFFECTS

The existing environment affected by the proposed actions and the potential environmental consequences of each alternative action are described in this chapter.

3.1 Visual Resources

3.1.1 Affected Environment

Tellico Reservoir, newest of the Tennessee Valley reservoirs, offers a somewhat unique visual character and scenic resource. While the ten navigable main channel reservoirs tend to lie parallel with the Valley, the Tellico impoundment enters the mainstream in a perpendicular fashion. This creates a variety in visual character ranging from gently rolling valley topography, to the mountain clear-stream entrance that the Little Tennessee makes below Chilhowee Dam. The Tellico River joins the reservoir in a similar fashion, as it emerges from the Appalachian foothills. The terrain of the area was a mix of open, rolling farmland combined with an expanse of tilled, river-bottom cropland, intermingled with wooded foothills, ridges, and fence rows prior to impoundment. The resulting landscape following the reservoir's impoundment in 1979 was similar, but with the river bottom cropland being replaced with a lake expanse.

Only the upper reaches of the Little Tennessee and the Tellico Rivers still reflect their pre-impoundment visual character. The balance of the reservoir land has a mix of new homes, industrial development, new highways, and an ever-growing, lake-oriented recreational use. However, in spite of the changes that have occurred since impoundment, the dominance of the valley-to-mountain setting that is the characteristic valued, scenic resource is still evident.

The creation of Tellico Reservoir has enhanced scenic viewing opportunities for homeowners, highway travelers, and recreationists. Land set aside through previous reservoir planning efforts and subsequent plan modifications (e.g., Rarity Bay) made available homesites in planned communities that take advantage of shoreline and backlying, lake view building sites. These controlled development efforts have resulted in visually acceptable subdivisions where uniform colors and building materials for the most part blend with the surroundings. While these homesites with their associated docking and lake use facilities are a visual departure from the previous landscape, their adherence to planned development has made them more visually acceptable. It is commonplace to see boaters idling along the shoreline admiring these lakefront homesites. Some scenic value exists for the shoreline viewer in viewing a passing boat or watching a fisherman sit quietly in an adjacent cove. However at times boat traffic, personal watercraft operation, or a bass tournament "blast off" may greatly decrease the scenic/aesthetic values associated with the reservoir.

Industrial development currently exists in the midportion of the reservoir near the Highway 411 crossing and the town of Vonore. Most of this development is light industry and lies within planned industrial parks. Rail service exists in the area and a railroad bridge is visible just downstream of the Highway 411 bridge. Some of the boat manufacturing plants which are shoreline based have taken care to blend their facilities in ways that make them more visually appealing to the lake user.

Just upstream of Highway 411 are the British Fort Loudoun and the Tellico Blockhouse restorations which make up the Fort Loudoun State Historic Area. The Sequoyah Museum, owned by the Eastern Band of the Cherokee Indians, is also located in this area. The portion of Highway 411 that crosses the reservoir at this point and Highway 321 that connects Maryville to Lenoir City have the state's Scenic Parkway designation. A short distance upstream of the state park, the reservoir narrows, and the viewer experiences passing from the openness of the Toqua area into the foothills and backlying mountains of the Cherokee National Forest. Water temperature drops noticeably at this point, the shoreline is less developed, and the viewer can enjoy the scenic resources of the Tellico Reservoir Wildlife Management Area. Only a few residences can be seen along this reach of the reservoir where it quickly returns to a clear, riverine character ending abruptly at Tallahassee and the Chilhowee Dam.

Areas of the reservoir which hold the greatest scenic value are those not yet developed, those that are a homeowner's predominant view, and the distinctive features in the landscape that are seen by the lake user and adjacent highway traveler. Undeveloped coves which allow the boater an anchorage in calm water, scenic bluffs and steep shoreline exhibiting rock outcroppings, and unusual vegetative growth are held by the public as the most valuable of the reservoir's scenic resources. Twenty-nine miles of shoreline (as described under Alternative A below), have excellent and distinctive visual qualities.

3.1.2 Environmental Consequences

This section discusses the potential effects the two alternatives would have on the visual resources (scenic/aesthetics) associated with the Tellico Reservoir land tracts.

Alternative A – The 1982 land use plan does not have a designation for scenic/aesthetic protection of TVA-held tracts. During recent field studies, seven parcels (24, 26, 48, 72, 99, 117, and 128) ranging in size from 3 acres to 645 acres and consuming 29.7 miles of shoreline were rated as having excellent and distinctive visual qualities. Under Alternative A, this land is currently allocated for Cultural/Public Use/Open Space Areas, Private Residential, and Natural/Wildlife Areas. If this alternative remains in place, there would continue to be no established plan that would allocate certain public lands for visual resource management. A general cumulative decline in undeveloped scenic/aesthetic resource would be expected as residential and commercial

development increases with the population in areas such as Rarity Bay, Foothills Pointe, and Tellico Village. Under Alternative A, no previously established visual buffers had been designated to help maintain the visual integrity of the remaining natural shoreline until the Shoreline Management Initiative (SMI) (TVA, 1998a) was formulated for all future residential development; however, as noted above, newer developments such as Rarity Bay have incorporated shoreline buffers and other visual protection measures, and developments such as Tellico Village have been designed to be aesthetically pleasing.

In addition, TVA considers visual impacts when selling private recreational easements for lands fronting lots in existing subdivisions, and the environmental evaluation that TVA performs prior to development of TVA lands or prior to issuance of Section 26a permits for developments on private lands addresses resultant visual impacts. This process may prevent some losses in visual quality or may enact mitigative measures that reduce scenic impacts. Under this alternative, development proposals are considered where appropriate, as long as they are consistent with the existing plan.

Alternative B – Adoption of this alternative would take into account the public's desires to protect scenic/aesthetic resources around Tellico Reservoir for the long term. This alternative generally has a beneficial effect on the visual resource. During the development of the proposed Plan, an analysis was conducted of each plannable tract of land on Tellico Reservoir. Land with distinctive visual characteristics and which possesses outstanding scenic qualities would be placed in the Sensitive Resource Management Zone or the Natural Resource Conservation Zone (Zones 3 and 4). Activities such as recreational hiking, picnicking, bank fishing, and some forest-management activities can take place under these designations. Also, some developmental change can also take place under these designations, as long as its placement and appearance are subordinate to the general visual characteristic.

The seven parcels previously noted in the discussion of Alternative A were rated in the allocation process as having excellent and distinctive visual qualities and would be allocated to the Sensitive Resource Management Zone. (Thirteen parcels would be allocated to the Natural Resource Conservation Zone [Zone 4].) These 20 parcels have 72.4 miles of shoreline and a total of 3063 acres or 24 percent of the total TVA land base on Tellico Reservoir.

Designation of a "River Corridor" or "Greenway" serves as a two-fold preserver of visual/aesthetic qualities. A Greenway sets aside a visual buffer as seen by the lake user in addition to providing a lake viewing corridor for the hiker and cyclist. The parcels of shoreline property being set aside for this purpose will preserve a number of small coves along the right bank of the reservoir that have traditionally been used as quiet anchorages by the boater. A Greenway Corridor along this shore will also provide middle and background views to the numerous residents living in Tellico Village on the opposite reservoir shore. Designation of the

38-acre parcel along Highway 411 for recreational uses would allow the Eastern Band of the Cherokee Indians to develop facilities that would increase the public's contact and viewing opportunities with Tellico Reservoir. While development of this narrow band of highway frontage will be highly visible to both highway travelers and lake users, it should increase awareness of and visitation to other cultural attractions in the area (Fort Loudoun, Sequoyah Museum, and the Block House). If care is given during design phases of these potential facilities, a blending of scenic values and aesthetics can be incorporated into a visually-acceptable development.

Under Alternative B, the cumulative impacts to visual resources would be less than Alternative A. The allocation of key visual parcels on the marginal strip to Zone 3 under Alternative B would offer important protection to the shoreline's visual quality when viewed from ongoing residential developments such as Rarity Bay and Foothills Pointe. Visual protection measures are incorporated into newer residential developments such as Rarity Bay. TVA will consider visual impacts when selling recreational easements to lot owners in other existing subdivisions. Further protection from cumulative impacts resulting from development pressures on Tellico Reservoir's scenic resources would be offered by the extensive shoreline protection proposed for the Little Tennessee River upstream of Toqua.

3.2 Cultural Resources

3.2.1 Existing Environment

For at least 12,000 years, the Tennessee River and the Little Tennessee River Valley have been an area for human occupation which became more intense through succeeding cultural periods. In the upper east Tennessee area, archaeological investigations have demonstrated that Tennessee and the eastern Ridge and Valley Region were the setting for each one of these cultural/temporal traditions, from the Paleo-Indian (12,000-8000 B.C.), the Archaic (8000-1200 B.C.), the Woodland (1200 B.C.-1000 A.D.), the Mississippian (1000-1500 A.D.), to the Protohistoric-Contact Period (1500-1750 A.D.). Prehistoric archaeological stages are based on changing settlement and land use patterns and artifact styles. Each of these broad periods is generally broken into subperiods (Early, Middle, and Late), which are also based on artifact styles and settlement patterns. Smaller time periods, known as "Phases" are represented by distinctive sets of artifactual remains. In addition, historic era cultural traditions have included the Cherokee (1700 A.D.-present), European- and African-American (1750 A.D.-present) occupations.

The Paleo-Indian Period (12,000-8000 B.C.) represents the documented first human occupation of the area. The settlement and land use pattern of this period were dominated by highly mobile bands of hunters and gatherers. The subsequent Archaic Period (8000-1200 B.C.) represents a continuation of the hunter-gatherer lifestyle. Through time, there is increasing social complexity and the appearance

of horticulture late in the period. The settlement pattern during this period is characterized by spring and summer campsites. Increased social complexity, reliance on horticulture and agriculture, and the introduction of ceramic technology characterize the Woodland Period (1200 B.C.-1000 A.D.). The increased importance of horticulture is associated with a less mobile lifestyle as suggested by semipermanent structures. The Mississippian Period (1000-1500 A.D.), the last prehistoric period in east Tennessee, is associated with the pinnacle of social complexity in the southeastern United States. This period is characterized by permanent settlements, maize agriculture and chiefdom level societies.

The Archaic through Mississippian Periods have been intensively investigated along the Little Tennessee River Valley (Chapman 1973, 1975, 1977, 1978, 1979a, 1979b, 1981; Cridlebaugh, 1981; Kimball, 1985; Polhemus, 1987; Davis, 1990; Guthe and Bistline, 1981). In addition, it is widely known historically that many settlements along the Little Tennessee River were Overhill Cherokee villages (Timberlake, 1927; Bartram, 1995). Many archaeological investigations in the 1960s and 1970s focused on the Cherokee occupation of the area (Schroedl, 1985; Baden, 1983; Russ and Chapman, 1984). Also studies of the trade relation between European-American and Cherokee have been conducted in the Tellico Reservoir (Polhemus, 1979). All of these investigations have provided additional details about the changing environments, shifting subsistence strategies and settlement patterns, and variations in the cultural material associated with each major stage.

TVA is mandated under the National Historic Preservation Act (NHPA) of 1966 and the Archaeological Resources Protection Act (ARPA) of 1979 to protect significant archaeological resources and historic properties located on TVA lands or affected by TVA undertakings. A historic property is defined under 36CFR§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” (NRHP).

In response to this federal legislation, TVA conducts inventories of its lands to identify historic properties. For the action proposed in this EIS, the Area of Potential Effect (APE) is the 12,643 acres of retained TVA lands being planned or previously committed to specific land uses. The APE as defined in 36 CFR §800.16(d) is “the geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if such properties exist.” Recently, TVA contracted with the University of Tennessee to conduct a Phase I Cultural Resources Survey of approximately 2,541 acres of TVA land being planned and located above summer operating range (elevation 812-813) on Tellico Reservoir. The parcels were initially identified for surveying based on the potential for development of these lands. Following additional investigations of sensitive resources on these lands, several parcels were proposed for Zones 3 and 4.

The survey was conducted by means of a pedestrian survey and systematic shovel testing from existing humus to culturally sterile subsoil. The soil matrix was screened through a one-fourth inch wire mesh screen. Crew members walked the areas in 20-meter transects and excavated shovel tests pits on 20-meter centers along each transect in zones of low slope and/or high site probability.

Existing data along with the recent survey results were reviewed, and over 750 archaeological resources have been identified within and along the Tellico Reservoir. An archaeological resource is defined as an area with any grouping of five or more nonmodern historic or prehistoric artifacts. A large number of these resources have been inundated due to reservoir impoundment. A total of 410 archaeological resources were identified in the area being planned. About 53 of these archaeological resources were recommended to be ineligible for listing in the NRHP; 323 were recommended to be potentially eligible for listing; and 34 were recommended to be eligible for listing. Further investigations of archaeological resources would be necessary to determine whether other resources are eligible for listing in the NRHP. About 10,102 acres were not fully investigated during the preparation of the Plan and EIS or during previous surveys. These parcels were not fully investigated because no development was proposed or parcels had a low probability of containing archaeological resources because of the site characteristics. Archeological resources were also identified on 17 miles of the 62.4 miles of residential access shoreline. In addition, the Lower Jackson Bend land tract recently conveyed by TRDA for commercial recreation development was surveyed for archaeological resources. No archaeological resources eligible or potentially eligible for listing on the NRHP were identified on the Lower Jackson Bend tract. However, a Mid-19th century cemetery, Wyly Cemetery, was identified within the tract. Only two of the fifty marked graves have discernible headstones- James and Mary Wyly. James Wyly was a Revolutionary War veteran who served from 1779-1781. The Wyly Cemetery was recommended for avoidance.

3.2.2 Environmental Consequences

Under either described alternative in this EIS and Plan, TVA would use the Phased Identification and Evaluation Procedure set forth in 36 CFR §800.4(b)(2), regulations of the Advisory Council on Historic Preservation implementing Section 106 of National Historic Preservation Act, in order to identify, evaluate, and assess effects on historic properties, and to determine the appropriate course of action prior to an Undertaking. An Undertaking is defined under 36 CFR §800.16(y) as "a project, activity or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including those carried out by or on behalf of a Federal agency; those carried out with Federal financial assistance; those requiring a Federal permit, license or approval; and those subject to state or local regulation administered pursuant to delegation or approval by a Federal agency." The results of archaeological testing on Tellico Reservoir would be consulted prior to undertaking site-specific activities under either alternative. TVA would continue the present process of case-by-case review in TVA-

controlled areas potentially subject to ground-disturbing actions such as dredging, shoreline development, or timber harvesting through Phased Identification and Evaluation of Historic Properties. Archaeological resources within these areas are avoided whenever possible. If avoidance is not possible, then proper procedures will be implemented in the mitigation of the historic property. TVA will take necessary steps to ensure compliance with regulatory requirements of NHPA and ARPA.

Under both alternatives, TVA has categorized the 62 miles of residential shoreline to protect sensitive resources, including historic properties. Archaeological resources were identified on about 17 miles of this shoreline. The predominant part of this shoreline is in Zone 3 or the Residential Mitigation category of Zone 7. Under either alternative, the cumulative impacts to archaeological resources would be insignificant.

Alternative A –There are a number of archaeological resources that are considered eligible or potentially eligible for listing in the NRHP on Tellico Reservoir lands. Table 3.2.2-1 shows the distribution of known archaeological resources in relation to the land uses under Alternative A. This table only includes TVA-retained land. Under this action, site-specific activities proposed in the future would be approved, mitigated, or denied according to the significance of the resource. If mitigation is required, appropriate archaeological investigation will be necessary, and potentially impacted resources will be properly recorded and removed. This plan does not provide for specific preservation of archaeological resources. However, TVA will comply with regulatory requirements of NHPA and the ARPA.

Table 3.2.2-1. Archaeological Resources Recorded Within TVA's Alternative A Land Use Categories

Category	Acreage	Number of Recorded Archaeological Resources
TVA Dam Reservation	665.9	5
Cultural/Public Use/Open Space Areas	7,679.9	157
Natural/Wildlife Areas	1,912.3	117
Industrial Development Areas	367.0	17
Recreation Areas	1,428.4	29
Private Residential Areas	423.6	82
Highway	56.1	1
Eastern Band of the Cherokee Indians Memorial Site	109.6	2
Total	12,642.8	410

Alternative B – Early identification of the presence of cultural resources through placement in Zones 3 and 4 avoids the likelihood of soil-disturbing activities in

areas known to contain historic properties. This would, in turn, save time and reduce costs and ensure greater protection than under Alternative A. All soil-disturbing activities that occur on parcels which contain historic properties would be reviewed and necessary steps taken to ensure compliance with regulatory requirements of NHPA and the ARPA.

The investigations at Tellico Reservoir identified a total of 410 archaeological resources on 87 of the parcels (Table 3.2.2-2). Under Alternative B, lands containing 62 percent of the identified archaeological resources would be allocated to Zones 3 (Sensitive Resource Management) and 4 (Natural Resource Conservation). Zones 3 and 4 would effectively preserve the resources. Further investigations will be required if the resources cannot be avoided. The remaining 38 percent of the archaeological resources are in Zone 2 (Project Operations), Zone 5 (Industrial/Commercial), Zone 6 (Recreation) and Zone 7 (Residential Access). At least 357 of these archaeological resources have been recommended to be either potentially eligible or eligible for listing in the NRHP. Although only 20 percent of the land proposed in Alternative B has been surveyed for archaeological resources, 53 percent of proposed development land under Zones 5 and 7 has been investigated. These zones would have the most potential for development, and the identification of archaeological resources within Zones 5 and 7 would enable development to avoid the resources effectively. If the resources could not be avoided, then further investigations would be required to determine the resources' eligibility for inclusion in the NRHP. Thus, under Alternative B, the archaeological resources would be protected at two levels; first, the resources in Zones 3 and 4 would be preserved since there would be no commercial, industrial, or residential development in these zones; and second, any ground-disturbing activity would be subject to compliance under Section 106 of the NHPA.

Table 3.2.2-2 Archaeological Resources Recorded Within Alternative B Land Use Zones

Zone	Acreage	Acreage Surveyed	Number (#) of Recorded Archaeological Resources	% of Zone Surveyed	# of Parcels	# of Parcels Containing Archaeological Resources
2	635.1	0*	6	0.0%	3	2
3	2,184.5	888.5	85	41.7%	28	24
4	7,136.5	1,087.5	173	15.2%	41	28
5	331.4	34.8	14	10.5%	8	4
6	1,803.5	88.0	40	4.9%	33	11
7	551.8	442.0	92	80.1%	27	18
Total	12,642.8	2,540.8	410	20.1%	139	87

* *No recent formal cultural resource survey, funded by TVA, has been conducted in this zone that would conform to Tennessee State Historic Preservation Officer (SHPO) Standards and Guidelines for Archaeological Resource Management Studies (1999).*

TVA and the Tennessee State Historic Preservation Officer (SHPO) have executed a Memorandum of Agreement (MOA, see Appendix C-1) specifying measures relating to the identification, evaluation, and treatment of historic properties that TVA will carry out prior to the commencement of any ground-disturbing activities. In addition, adjoining landowners with a demonstrated interest in a specific ground-disturbing activity due to the nature of their legal or economic relation to a particular undertaking will be invited to be consulting parties. The MOA allows phased identification, evaluation, and treatment of the historic properties located within the APE. TVA will conduct surveys to identify all previously unrecorded historic properties within the APE. TVA will then evaluate the historic significance of properties identified through the survey in accordance with 36 CFR § 800.4(c). For properties that have been determined to be potentially eligible for the NRHP, TVA will perform a Phase II site evaluation. TVA will ensure that historic properties determined eligible for listing in the NRHP will be avoided whenever prudent and feasible by any activities that could affect the characteristics of a site that qualify it for listing in the NRHP. When adverse effects through physical destruction or damage to historic properties eligible for the NRHP under Criterion (d) of 36 CFR § 60.4 is unavoidable, data recovery will be implemented.

3.3 Threatened and Endangered Species

3.3.1 Affected Environment

3.3.1.1 Plants

In researching plant communities on Tellico Reservoir, TVA Regional Natural Heritage Program databases and other sources were used to compile a list of state- and/or federally-listed species known to occur or to have suitable habitat on Tellico lands planning parcels. Field inventories were conducted on all uncommitted land (that is, land without existing commitments).

No populations of federally-listed plant species are known to exist on any TVA land on Tellico Reservoir. The nearest known such population is approximately 4.5 miles to the east of the reservoir in the Great Smoky Mountains National Park. One species listed as endangered in Tennessee is thought to be present, but a positive identification has yet to be made. One species listed as threatened in Tennessee and two species listed as special concern (one commercially exploited) in Tennessee have been located. Table 3.3.1.1-1 lists these species and their status, as well as three species that have been found on Tellico Reservoir in the past but were not found during the course of this survey.

> Bur-reed: Ten to 15 clumps of a *Sparganium* species were found during the survey of the Tellico Lands Planning Parcel 26. This small tract contains an open, herbaceous wetland that is drained by a small stream. Two species of *Sparganium* have been documented from Tennessee:

Sparganium americanum, which is reasonably common in east Tennessee, and *S. androcladum*, a northern species, which has only been collected twice in the state and which is state-listed as endangered. The leaves of the Tellico plants are distinctly triangular in cross-section, a characteristic of *S. androcladum* rather than *S. americanum*. There were no flowering stems present, however, and a definitive identification could not be reached.

False foxglove: This is a parasitic, late summer-flowering member of the foxglove family. This species is a rather coarse, clump-forming perennial with large yellow flowers, opposite leaves, and long stems. It grows on steep, dry, partially-shaded calcareous slopes above large streams and rivers, and is usually found within a few meters of the water.

A population of false foxglove was found at the entrance of the cove in Parcel 4. The plants are growing at the base of the steep west-facing bluffs, a few meters from the water's edge, along the main channel of the reservoir. Approximately 100-200 clumps were found on the north side of the cove (Parcel 3) and approximately 50 on the south side (Parcel 4). The steep slopes provide protection and a natural buffer to this site, reducing the possibility of impacts as a result of development elsewhere on these two parcels.

Carey's saxifrage: This spring-flowering species is a low, clump-forming plant with toothed leaves and an open cluster of small white flowers. It grows on moist, forested limestone cliffs and steep, rocky slopes. Several individuals of this species were found along the northwest edge of the Tellico Dam Reservation in a high-quality, mesic-limestone bluff community.

Goldenseal: This perennial herb is related to the buttercup and has large, yellowish, five-lobed leaves and bright red fruits. It grows in moist to dry forests with rich, limestone-derived soil. Three individuals were located on a single parcel. This species is listed as special concern-commercially exploited in Tennessee because of the heavy demand for its roots as a folk medicine.

Bigleaf pondweed: This member of the pondweed family is typically found in ponds, lakes, and slow-moving water. It is characterized by elliptical floating leaves and lance-shaped, submerged leaves. Flowers are often underwater and, therefore, frequently go unnoticed. This species had previously been found in the main channel of the Little Tennessee River and may still occur in the upstream, more riverine sections of the reservoir.

Tennessee pondweed: This member of the pondweed family occurs in streams and rivers. Tennessee pondweed is characterized by very narrow (0.2-2 mm) submerged leaves. It had previously been found in the main channel of the Little Tennessee River and may still occur in the upstream, more riverine sections of the reservoir.

Pondweed: This member of the pondweed family is typically found in still or moving water of pools, lakes, and streams. This plant has two types of leaves: floating leaves that are wide and egg-shaped and submerged leaves that are narrow and strap-shaped. It had previously been found in the main channel of the Little Tennessee River and may still occur in the upstream, more riverine sections of the reservoir.

Table 3.3.1.1-1 Listed Plant Species Known From or Potentially Occurring Adjacent to Tellico Reservoir

Common Name	Scientific Name	Federal Status	Tennessee State Status
American barberry	*Berberis canadensis*	-	SC
Bigleaf pondweed	*Potamogeton amplifolius**	-	Threatened
Branching bur-reed	*Sparganium sp.***	-	Endangered-PE
Broadleaf bunchflower	*Melanthium latifolium*	-	Endangered
Bugbane	*Cimicifuga rubifolia*	-	Threatened
Bush honeysuckle	*Diervilla lonicera*	-	Threatened
Butternut	*Juglans cinerea*	-	Threatened
Canada lily	*Lilium canadense*	-	Threatened
Carey's saxifrage	*Saxifraga careyana***	-	SC
False sunflower	*Tetragonotheca helianthoides*	-	Endangered
False foxglove	*Aureolaria patula***	-	Threatened
Ginseng	*Panax quinquefolius*	-	SC-CE
Goldenseal	*Hydrastis canadensis***	-	SC-CE
Large-tooth aspen	*Populus grandidentata*	-	SC
Meehan's mint	*Meehania cordata*	-	Threatened
Pondweed	*Potamogeton epihydrus**	-	SC
Purple fringed orchid	*Platanthera peramoena*	-	SC
Running strawberry bush	*Euonymus obovatus*	-	SC
Sapsuck	*Buckleya distichophylla*	-	Threatened
Smooth leaved honeysuckle	*Lonicera dioica*	-	SC
Sunrose	*Helianthemum canadense*	-	Endangered
Sunrose	*Helianthemum propinquum*	-	SC
Sweet pinesap	*Monotropsis odorata*	-	Threatened
Tennessee pondweed	*Potamogeton tennesseensis**	-	Threatened
Water purslane	*Didiplis diandra*	-	Threatened

***** *Species reported from the Little Tennessee River prior to impoundment of Tellico Reservoir and not encountered during this survey.*

****** *Species found during this survey.*

\- *No status.*

***Endangered-PE**: Endangered-Presumed Extirpated.*

***SC:** Special Concern.*

***SC-CE:** Special Concern-Commercially Exploited.*

3.3.1.2 Terrestrial Animals

Review of TVA Regional Natural Heritage Program databases indicated the presence of five rare terrestrial animals and one sensitive ecological area on Tellico Reservoir lands. Three additional protected animal species and three caves were found during field investigations by TVA biologists during the planning process. Of these species, only the bald eagle is federally listed. These species and areas are listed in Table 3.3.1.2-1.

Bald Eagle - Bald eagles are slowly increasing in numbers in eastern Tennessee. Two pairs of bald eagles nest on Tellico Reservoir lands. Nests are located near Ballplay and Citico Creek. These areas also provide important foraging habitat for bald eagles. A 1-mile buffer zone has been established around each nesting site according to USFWS regulations, and each nesting area has been designated a TVA Habitat Protection Area. Because of the eagles' rangewide population increase, in July 1999, the USFWS proposed to remove it from the list of endangered and threatened species.

Osprey - Several osprey were observed foraging on Tellico Reservoir during field surveys. Osprey are not known to nest on Tellico Reservoir. However, nesting platforms have been placed on the reservoir by the Tennessee Ornithological Society and TVA biologists. Osprey nest on nearby Watts Bar, Fort Loudoun, and Fontana Reservoirs. Due to recent increases in numbers throughout east Tennessee, osprey may soon nest on Tellico Reservoir.

Sharp-shinned Hawk - These small hawks were observed in Baker Hollow during summer surveys on Tellico Reservoir. While no nesting has been confirmed, one adult sharp-shinned hawk was observed attacking larger birds in the area, indicating a possible nesting territory in that area.

Common Barn Owl - Barn owls are uncommon throughout Tennessee. Nests are typically found in old barns, silos, and in small caves located in forested bluffs. They often nest in close proximity to man. A barn owl nest was found in a small cave in a bluff near Jackson Bend. Large amounts of owl pellets and skeletons of small mammals indicate that the nest has been used for many years.

River Otter - This semiaquatic mammal has been reported on Kirkland Island on the Little Tennessee River. Although not protected in western Tennessee, the species is listed as threatened in central and east Tennessee. In these areas, populations were decimated in earlier years. Reintroduction activities by TWRA and the Great Smoky Mountains National Park have increased numbers of river otters in eastern Tennessee. Other rare species of wildlife and plants occur on Kirkland Island and adjacent TVA lands.

Green Anole - This small lizard has been observed at several sites on Tellico Reservoir lands. This species can be found along bluff areas around the Tellico Reservoir. One green anole site, located at Little Tennessee River Mile 30, has been studied extensively by researchers from the University of Tennessee. This site is designated as a TVA Ecological Study Area (Zone 3). Smaller populations of green anoles have been observed near Fourmile Creek, Notchy Creek, and Corntassel Branch on Tellico Reservoir.

Junaluska Salamander - This small salamander was reported from the reservoir area prior to its impoundment. It is typically found in or adjacent to medium- to large-sized streams. Junaluska salamanders were reported along the Little Tennessee River prior to the construction of Tellico Reservoir.

Eastern Hellbender - This aquatic salamander was reported at several sites in the Little Tennessee River before its impoundment. Although not likely to be found in the reservoir, this species may still be found in Citico Creek.

Table 3.3.1.2-1 Listed Terrestrial Animals and Sensitive Ecological Areas Known From Lands Planning Parcels on Tellico Reservoir

Common Name	Scientific Name	Federal Status	Tennessee State Status
Bald Eagle	*Haliaeetus leucocephalus*	Threatened	Endangered
Osprey	*Pandion haliaetus*	-	Threatened
Sharp-shinned Hawk	*Accipiter striatus*	-	NMGT
Common Barn Owl	*Tyto alba*	-	NMGT
River Otter	*Lutra canadensis*	-	
Green Anole	*Anolis carolinensis*	-	NMGT
Junaluska Salamander	*Eurycea junaluska*	-	NMGT
Eastern Hellbender	*Cryptobranchus alleganiensis alleganiensis*	-	NMGT
Sensitive Ecological Areas			
Resource	**Justification**		
Kirkland Island and Adjacent Lands	Biologically significant including the presence of protected animals and plants.		
Unnamed Cave	Biologically significant including the presence of protected animals.		
Unnamed Cave	Biologically significant.		
Unnamed Cave	Biologically significant.		

NMGT - Listed as in need of management by the Tennessee Wildlife Resources Agency.
- No Status

Three caves were identified during lands planning surveys. Cave environments are extremely fragile, and species of animals that are associated with caves are often sensitive to human disturbance. One way to help protect the cave environment

would be to place a protective buffer around each cave opening. State-listed barn owls were found in one cave opening near Jackson Bend. Species of wildlife identified at the remaining caves include eastern pipistrelle (*Pipistrellus subflavus*), gray fox (*Urocyon cinereoargenteus*), and cave salamander (Eurycea lucifugus). Due to their biological significance, all these caves were identified as significant ecological areas.

TVA databases indicate three additional state-protected animal species within a 10-mile radius of the center of Tellico Reservoir. These species, listed in Table 3.3.1.2-2, include one bird, one reptile, and one amphibian.

Grasshopper Sparrow - This sparrow is typically found in early successional habitats such as hay fields or lightly grazed pastures. It has been reported from several fallow fields just west of TVA lands, and formerly occurred on several tracts transferred to TRDA. Recent statewide breeding bird censuses indicate that this species may be increasing in numbers in portions of Tennessee (Nicholson, 1997). Although the species was not found during summer surveys, grasshopper sparrows may utilize grasslands on Tellico Reservoir lands.

Eastern Glass Lizard - This snake-like lizard has been reported just east of the Little Tennessee River. Eastern glass lizards are usually found in dry, upland habitats having loose sandy soils. Population levels for this species throughout the state are not well known. Glass lizards may be found on more open, upland areas on Tellico Reservoir lands.

Black-bellied Salamander - This mostly aquatic salamander is typically found in small to medium-sized streams. Black-bellied salamanders have been reported east of Tellico Reservoir. Although listed as in need of management in Tennessee, this salamander is quite common in eastern Tennessee. This species may be found in smaller, cooler streams adjacent to Tellico Reservoir lands.

Table 3.3.1.2-2 Listed Terrestrial Animals Reported Within a 10-Mile Radius of Tellico Reservoir

Common Name	Scientific Name	Federal Status	Tennessee State Status
Grasshopper Sparrow	*Ammodramus savannarum*	-	NMGT
Eastern Glass Lizard	*Ophisaurus attenuatus longicaudus*	-	NMGT
Black-bellied Salamander	*Desmognathus quadramaculatus*	-	NMGT

NMGT - Listed as in need of management by the Tennessee Wildlife Resources Agency.
- No status.

Although not reported from Tellico Reservoir lands, additional protected terrestrial animal species may be found because many parcels contain suitable habitat for several listed species. Suitable habitat exists for the following species, listed in Table 3.3.1.2-3:

Gray Bat - Gray bats usually roost in caves throughout the year. They forage primarily over reservoirs and along stream corridors. The species has been reported from Fontana and Watts Bar Reservoirs. However, due to the lack of suitable roosting caves on Tellico Reservoir, gray bats probably use it on a limited basis.

Indiana Bat - This species roosts in caves during winter months and forms maternity colonies under loose tree bark during summer months. The Indiana Bat typically forages along stream corridors in addition to bottomland and upland forested areas. Recently, population levels of Indiana bats have been decreasing throughout its range. Indiana bats appear to be uncommon in eastern Tennessee. However, U.S. Forest Service personnel captured one Indiana bat in upland forests near Ballplay in 1998, less than 2 miles from Tellico Reservoir. Similar habitat exists on several Tellico Reservoir parcels.

Small-footed Myotis - This small bat usually roosts in crevices along bluffs and in caves. The distribution of this species in Tennessee is poorly known. Suitable roosting habitat was observed along bluff habitats on several Tellico Reservoir parcels.

Meadow Jumping Mouse - This species inhabits herbaceous cover near streams, old fields, and meadows. Although records indicate that this species may be more abundant west of the Tennessee River, meadow jumping mice may be found in suitable habitats on Tellico Reservoir lands.

Southeastern Shrew - This medium-sized shrew can be found in a variety of habitats ranging from deciduous forested areas to open field habitats. Although uncommon, this species has a wide distribution throughout Tennessee. Southeastern shrews may be found in a variety of habitats on Tellico Reservoir lands.

Cooper's Hawk - This medium-sized hawk typically nests in deciduous forests, often in close proximity to human dwellings. Although not common throughout Tennessee, population levels of Cooper's hawks are increasing. Many forested tracts on Tellico Reservoir contain suitable habitat for this species.

Table 3.3.1.2-3 Listed Terrestrial Animals Potentially Present on Lands Planning Parcels on Tellico Reservoir			
Common Name	**Scientific Name**	**Federal Status**	**State Status**
Gray Bat	*Myotis grisescens*	Endangered	Endangered
Indiana Bat	*Myotis sodalis*	Endangered	Endangered
Small-footed Myotis	*Myotis leibii*	-	NMGT
Meadow Jumping Mouse	*Zapus hudsonius*	-	NMGT
Southeastern Shrew	*Sorex longirostris*	-	NMGT
Cooper's Hawk	*Accipiter cooperii*	-	NMGT

NMGT - Listed as in need of management by the Tennessee Wildlife Resources Agency.
- No status.

3.3.1.3 Aquatic Animals

TVA databases indicate that several state- and federally-listed fish are known from waters adjacent to, and are potentially present in, Tellico Reservoir. These species and their status are listed in Table 3.3.1.3-1 and further described in the following paragraphs.

Duskytail darter - This darter is known from four widely separated localities in the Tennessee basin, including Citico Creek. In Citico Creek, the species has recently been found as far downstream as the backwaters of Tellico Reservoir. It is found in various sizes of rocky substrates, from small gravel, rubble/cobble, slabs, and bedrock substrates along the edges of gently-flowing shallow pools, eddies, and slow runs. Duskytail darters can often be found in association with detritus and some siltation, but are not found in areas where silt obscures the spaces between rocks.

Smoky madtom - The smoky madtom is known only from two streams, including Citico Creek. In Citico Creek, the species has recently been found downstream almost to the backwaters of Tellico Reservoir. During spring and summer, smoky madtoms inhabit riffles and runs and the shallow, gently-flowing heads and foots of pools. During the late fall and winter, they are found beneath slabrocks in pools.

Tennessee dace - Known from scattered, small tributaries in the Ridge and Valley physiographic province of the upper Tennessee River drainage, the Tennessee dace occurs in small woodland tributaries, usually 2- to 5-feet wide, often where there is some influence of springs. They inhabit pools, in association with undercut banks, brush, or other debris. Tennessee dace are known from areas in Ninemile Creek upstream from the TVA boundary. Habitat suitable for Tennessee dace may also exist in Baker Creek and Hammontree Branch on Tellico Reservoir properties.

Flame chub - Flame chubs are found in springs and spring-fed headwater streams in the upper and middle portion of the Tennessee River drainage. Flame chubs are not known to occur in waters adjacent to or in Tellico Reservoir. However, habitat suitable for flame chubs may exist in the spring run of Baker Creek.

Table 3.3.1.3-1 State- and Federally-Listed Fish Found in Adjacent Waters and Potentially Present in Tellico Reservoir

Common Name	Scientific Name	Federal Status	Tennessee State Status
Duskytail darter	*Etheostoma percnurum*	Endangered	Endangered
Smoky madtom	*Noturus baileyi*	Endangered	Endangered-
Tennessee dace	*Phoxinus tennesseensis*	-	NMGT
Flame chub	*Hemitremia flammea*	-	NMGT

NMGT - Listed as in need of management by the Tennessee Wildlife Resources Agency.
- No status

There are historical records of several additional aquatic species which existed in the reservoir area prior to impoundment, but are not likely to occur in the habitat presently available in the pool area. These include:

- One federally-listed endangered snail (Anthony's riversnail [*Athearnia anthonyi*]).
- One federally-listed endangered mussel (yellow blossom pearlymussel [*Epioblasma florentina florentina*]).
- Four fishes. One of these fishes is now a federal threatened species (snail darter [*Percina tanasi*]) and the other three are listed as in need of management in Tennessee (blue sucker [*Cycleptus elongatus*], tangerine darter [*Percina aurantiaca*], and blotchside logperch [*Percina burtoni*]).

3.3.2 Environmental Consequences

The following sections describe anticipated impacts to federally-listed, as well as state-listed, threatened and endangered species. The bald eagle, listed by the USFWS as threatened, is a resident in the reservoir area. Other federally listed species potentially occurring in the reservoir area are the gray bat, the Indiana bat, the duskytail darter, and the smoky madtom. TVA has determined that its proposed actions would not affect the gray bat, and are unlikely to adversely affect the Indiana bat, the bald eagle, the duskytail darter, and the smoky madtom. In accordance with Section 7 of the Endangered Species Act, TVA is requesting USFWS concurrence with these determinations.

3.3.2.1 Plants

Alternative A – Because no populations of federally-listed plants are known or likely to occur on Tellico Reservoir lands, no impacts to such species are expected. The four state-listed plant populations found in this survey occur on tracts designated as Dam Reservation (Cary's saxifrage) and Cultural/Public Use/Open Space Areas (goldenseal, bur-reed, and false foxglove) under the current designations. These and other populations of listed species that might be discovered in the future, would continue to be considered during TVA environmental review of individual projects, and protective or mitigative measures would be implemented as required by law and internal TVA policy. Therefore, no direct impacts to rare plants are anticipated from this alternative.

Many of the parcels being considered in this EIS contain potential, but currently unoccupied, habitat for listed species. Some of these parcels may be suitable for recovering state-listed species in the future, but that is not the overriding goal of the current allocations under Alternative A. Significant alteration of current management practices could diminish or eliminate the possibility of listed plants establishing new populations in the future.

Alternative B – Because no populations of federally-listed plants are known or likely to occur on Tellico Reservoir lands planning parcels, no impacts to such species are expected.

Under Alternative B, the internal TVA environmental review process would continue to address direct threats to listed plants. Populations of listed plant species that might be discovered in the future would continue to be considered during the environmental review of individual projects. Protective or mitigative measures would be implemented as required by law and internal TVA policy. The planning zones established in Alternative B would provide an additional level of protection for the ecologically-sensitive parcels by acting as a "first filter" in the early stages of project planning, thereby minimizing conflicting land use requests. No impacts to rare plants are anticipated from this alternative.

One species found during a survey, Carey's saxifrage, is located on the Tellico Dam Reservation. Under Alternative B, this parcel would be allocated to TVA Project Operations (Zone 2). Management of this parcel would focus upon operation of dam facilities, as well as protection of dam, switchyard, and transmission line integrity. The bluff habitat for this species is not likely to be impacted by these management practices.

Parcel 26, which contains two rare plants, is designated as Sensitive Resource Management (Zone 3). Under Alternative B, management would focus upon protection and enhancement of ecological function, and would provide a high level of protection for the integrity of the rare species found there. Parcels 3 and 4 contain a large population of false foxglove and would also be designated as Sensitive Resource Management (Zone 3) under Alternative B.

Under Alternative B, 74 percent of the land base being considered in this EIS would be designated as "Sensitive Resource Management" or "Natural Resource Conservation." Most parcels which would receive these designations contain potential habitat for one or more state-listed plant species. Management of Sensitive Resource Management parcels would focus upon protection and enhancement of ecological function, and would provide a high level of protection for the integrity of the significant natural features contained within them. Management of the Natural Resource Conservation parcels would focus upon manipulation of natural resources to enhance the quality of consumptive and nonconsumptive human activities such as hunting, timber harvesting, and wildlife observation. As with the Sensitive Resource Management parcels, this designation would increase awareness of the ecologically significant areas within them, would reduce conflicting usage requests, and would increase the level of protection provided to these sites.

3.3.2.2 Terrestrial Animals

Alternative A – Currently, decisions regarding the use of TVA lands adjacent to Tellico Reservoir are based upon the existing land use. That plan is similar to the proposed Alternative B. Both plans allocate tracts of land into specific categories such as recreation, wildlife, and cultural resources. However, current tract designations are based upon limited data. Under the existing plan, several tracts of excellent wildlife habitat around Notchy Creek Knobs and Blankenship Cemetery are designated as Cultural or Public Use areas. While this designation does afford these tracts some protection, many sites of these tracts can be very sensitive to human disturbance and need further protection. This alternative also provides no specific protection for the barn owl and caves near Blankenship Cemetery.

Effects to populations of terrestrial threatened and endangered species would be considered during TVA environmental reviews associated with specific projects. Therefore, no significant adverse impacts are expected. Although this would protect most populations of rare terrestrial animals, TVA's ability to address cumulative impacts to rare terrestrial animals would be limited.

Alternative B – Under this alternative, specific land use categories (i.e., Zone 3 - Sensitive Resource Management and Zone 4 - Natural Resource Conservation) would be designated and defined to protect sensitive terrestrial animals and their habitats and sensitive ecological areas. Parcels that are determined to provide habitat for federally-listed animals would be protected or managed for those species and habitats. Bald eagle nest sites were already designated as Natural/Wildlife areas under the current system. In addition, during land planning allocations proposed under Alternative B, a 1-mile buffer zone has been placed around each bald eagle nest and would be designated as a Habitat Protection area and placed in the Sensitive Ecological area category (Table 2.2.2-1, Zone 3).

Areas known to have populations of state-listed species such as green anole, barn owl, and river otter were designated as Sensitive Ecological areas or Ecological Study areas. Most of these sites were already in areas protected due to cultural resources. However, one area used by a small population of green anoles is currently designated as Residential. Under Alternative B, this area has been designated as a Sensitive Ecological area. Caves along Tellico River and near Blankenship Cemetery have been designated as Sensitive Ecological areas. Therefore, they would be better protected under Alternative B.

Parcels determined to have suitable "potential" habitat for protected terrestrial animals would be placed in Zone 4 where activities such as wildlife habitat management, hunting, and recreation would be allowed. These activities would benefit most listed species that may be found on these parcels. Much of the Notchy Creek Knobs area fits into this category. Most reservoir lands in the vicinity of Ballplay, where an Indiana bat was reported in 1998, would be placed in Zones 3 and 4. This would minimize potential impacts to any Indiana bats roosting or foraging in this area.

Under this alternative, the potential for cumulative impacts to rare species would be better assessed because the land planning process addresses all TVA Tellico Reservoir lands at one time. Areas determined to have rare species would be protected. Sensitive resources would be identified before specific projects arise and projects would only be considered on parcels already determined to be unsuitable for listed terrestrial animals or other sensitive resources.

Due to changing environments and the movement of wildlife, the environmental review process will be performed on individual projects. This allows TVA to identify new populations of listed species and provide protective or mitigative measures as required by the Endangered Species Act, National Environmental Policy Act and TVA policy. No significant negative impacts are anticipated from this alternative.

3.3.2.3 Aquatic Animals

Alternative A – Some lands critical for protecting sensitive aquatic animals have already been transferred to the TWRA as Wildlife Management areas. No other land parcels retained by TVA were identified as appropriate for land use categories specifically designated to protect sensitive aquatic animal species or specialized habitats. However, tracts managed as Natural/Wildlife Areas or Cultural/Public Use/Open Space Areas afford some protection that might be important for sensitive aquatic animals. In addition, existing environmental review procedures, including compliance with the Endangered Species Act, would assure that TVA actions would not likely adversely affect the habitat of rare species. However, while TVA would protect sensitive species during individual reviews, there is some potential for indirect or cumulative impacts under the No Action Alternative.

Alternative B – Some lands critical for protecting sensitive aquatic animals that have already been transferred to the TWRA as Wildlife Management areas would continue to be managed by TWRA. In addition, although no parcels were identified specifically to protect habitats necessary for state- or federally-listed aquatic species, Alternative B protects several large areas containing wetlands and other sensitive terrestrial habitats. Many of these areas will act as riparian buffer zones and, thus, will have an indirect but positive effect on aquatic habitat quality. Also, large lowland areas protected for cultural concerns may provide additional protection to aquatic habitats. Therefore, if any sensitive aquatic species are present, Alternative B will afford these species and/or habitat greater protection than the 1982 land use plan.

3.4 Terrestrial Ecology and Significant Natural Features

3.4.1 Affected Environment

Tellico Reservoir is located on the eastern edge of the Appalachian Ridge and Valley physiographic province of mideast Tennessee (Fenneman, 1938; Miller, et al., 1966), and is within the Appalachian oak forest as described by Kuchler (1966). It is bordered along much of its upper reaches (Tellico River-Ballplay Creek-Upper Little Tennessee River) by the United States Department of Agriculture's Cherokee National Forest. This area is predominantly forested upland habitat managed by the Forest Service to meet a diversity of public-oriented natural resources management and recreational needs. The eastern shoreline of the reservoir downstream from Vonore is bordered by typical east Tennessee rural landscape which includes a combination of small woodlots, orchards, livestock pasture and open hayfields associated with small farms. The western shoreline is predominantly developed as industrial property (TRDA Industrial Park, Niles Ferry Industrial Park) or residential property (Tellico Village, Rarity Bay). The lower end of the reservoir is predominantly land associated with the Tellico Dam Reservation which includes upland hardwoods, early successional habitats, agricultural land and beaver pond wetlands.

Forest is the predominant land cover type in the Tellico Reservoir area, and about 90 percent of the land area within one-fourth mile of the reservoir shoreline is forested (1994 TVA data). Forests adjacent to Tellico Reservoir make up a significant proportion of the total forest area in Loudon County. Due to the large forested areas in southern Blount and Monroe Counties, the Tellico shoreland forests make up a small proportion of the forest area in these counties.

TVA-retained lands total approximately 12,643 acres, most of which is in some type of forest cover. Hardwood types (upland, bottomland, and mixed) comprise about 46 percent of the forested area while mixed types (pine-hardwood, pine-cedar-hardwood, etc.) occupy 35 percent, pine 17 percent, and redcedar 1 percent. The remaining 1 percent of forested area includes idle/reverting fields and kudzu patches.

Upland hardwood is dominated by oaks (white, southern red, black, chestnut and scarlet) and hickories with smaller numbers of yellow-poplar, red maple, beech, and blackgum. Bottomland hardwood is restricted to low-lying areas along creeks and rivers and is occupied by sweetgum, red maple, ash, and sycamore. Most of the pine stands on Tellico Reservoir are located on areas that were previously agricultural fields; the majority of these reverted naturally to Virginia pine, but some smaller areas were planted with loblolly pine. Idle/reverting areas are dominated by shrubs and small trees including sumac, sassafras, persimmon, and dogwood.

Managed open lands on Tellico Reservoir include approximately 284 acres of agricultural licenses of hay or pasture. In addition to supporting domestic livestock, some of these tracts are cooperatively managed to provide browse for resident Canada geese. Outside of the actively-managed forest stands (about 12 percent of the land area being planned) and managed open land is significant acreage of unmanaged forest stands and open lands lying in narrow strips along the reservoir shoreline. Included are old fields in various stages of succession, and forested riparian edge. The wetland communities found on Tellico Reservoir properties make up a relatively small percentage of the existing land types and are discussed in Section 3.5, Wetlands/Riparian Ecology.

Natural resource inventories have identified a diversity of plant and animal life on Tellico Reservoir lands which can be attributed to the varying land forms and topography.

Mammals commonly found in these habitats include:

- gray squirrel
- white-tailed deer
- woodchuck
- eastern cottontail rabbit
- white-footed mouse
- raccoon
- opossum
- gray fox

Bird species using these habitats throughout the year include:

- wild turkey
- northern bobwhite quail
- woodpeckers
- song sparrow
- northern cardinal
- eastern bluebird

Neotropical migrant birds include:

- yellow-billed cuckoo
- red-eyed vireo
- yellow-throated warbler
- indigo bunting

Common reptile species utilizing these habitats include:

- eastern box turtle
- black rat snake
- five-lined skink

Table C-2.1 in Appendix C-2 lists many additional wildlife species found on TVA lands on Tellico Reservoir by community type. Moist productive bottoms are found along much of the Tellico River and other large tributaries; forested slopes characterize Notchy Creek Knobs and other areas; while steep wooded bluffs with an array of wildflowers occupy many shoreline areas. One such bluff also provides habitat for the largest known Tennessee population of the green anole, a lizard of primarily tropical distribution that is listed as in need of management in Tennessee.

Historically, TVA's resource management activities have been planned and implemented as a means of demonstrating environmentally acceptable and cost-effective strategies for managing publicly-owned natural resources. Many of these activities in the last 16 years occurred on mainstream TVA reservoirs which have been subjected to a lands planning process, with most lands allocated to specific categories based on technical data and public input. This long-term (ten years) allocation of certain lands to natural resource uses (i.e., Wildlife and Forest Management) has allowed TVA to invest time and money in some tracts to maintain and enhance biological diversity, protect sensitive wildlife species, and provide public use and enjoyment of the terrestrial environment.

Tellico Reservoir differs from most tributary reservoirs in that natural resources management and associated public use was a significant issue prior to and following reservoir inundation. An effort was made to delineate Natural/Wildlife Areas (1912 acres) on the reservoir as part of the Contract No. TV-60000A between TVA and TRDA, which dictated the framework for the development of Tellico Reservoir properties. TRDA properties that were allocated for Cultural/Public Use/Open Space Areas provide habitat for a variety of upland wildlife species previously mentioned. Other TRDA property that was allocated for Commercial Recreation and Industrial Development, such as Lower Jackson Bend and Wears Bend respectively, have not been developed to date and provide good habitat diversity for a variety of terrestrial resources. Wears Bend, which totals about 2000 acres, contains a variety of habitats and supports a substantial number of natural resource uses. It has been licensed to TWRA by TRDA for designation as a Wildlife Management Area on an interim basis.

In 1985, TWRA requested, and was granted, a license and easement from TVA allowing for development of a proclamated wildlife management area and waterfowl refuge on the upper portion of the reservoir. The Tellico Lake Wildlife Management Area (TLWMA) and Chota Waterfowl Refuge (CWR), which total approximately 6000 acres of land and water area between Little Tennessee River Miles 23 and 33, include land that was allocated to Natural/Wildlife Areas and Cultural/Public Use/Open Space Areas under Contract No. TV-60000A. In 1986, a waterfowl subimpoundment of approximately 100 acres was developed on the CWR through a cooperative effort by TVA, TWRA, and Ducks Unlimited, Inc. (DU). This was DU and TWRA's first Matching Aid to Restore States Habitat Project in the state of Tennessee and has been quite successful with the impoundment supporting an average of 2500 wintering migratory waterfowl.

At the same time TWRA was pursuing establishment of the TLWMA and CWR, TVA's wildlife program was actively initiating partnerships with Quail Unlimited, Inc. (QU) to jointly manage select parcels of Tellico Reservoir property to enhance habitat for upland wildlife. A cooperative agreement was established in 1986 between TVA and the Blount County Chapter of QU to cooperatively manage portions of the Carson Woods tract. This parcel was allocated for Cultural/Public Use/Open Space Areas under Contract No. TV-60000A. On April 26, 1996, the contract with the Blount County Chapter was canceled and replaced with Contract No. TV-99378V between TVA and the East Tennessee Chapter of QU. Since that time, this QU chapter has provided an estimated $7200 worth of leveraged management value on this tract in the form of native warm season grass establishment and the development of annual wildlife food plots.

Significant Natural Features

During the planning process, two areas on Tellico lands were identified as warranting protection because of the presence of ecologically significant plant communities: Upper Baker Creek, a riverine canebrake community, and Hall Bend, a combination of barren and bluff communities adjacent to a relatively mature hardwood forest.

Upper Baker Creek - A 1-mile stretch of stream with a forested riparian canebrake is located within this parcel. Much of the northern bank of the stream is grazed, and the site quality is significantly degraded. Along the southern bank, the canebrake occurs primarily in a narrow floodplain at the base of a steep slope. The floodplain and the adjacent hill are not grazed and have a mature oak/hickory forest, with additional riparian tree species in the floodplain. River cane is found continuously along this stretch, but the dense canebrake areas are sporadic.

This is by far the largest and highest quality canebrake encountered during surveys of Tellico Reservoir. Because of the rarity of high-quality examples of this community type, both regionally and globally, this is a particularly notable site on the reservoir and merits protection. The forest on the adjacent hillside should also be protected to provide buffer to this community.

Hall Bend - Located on the Tellico Dam Reservation, this half-acre site is an open, limestone bluff with a well-developed barrens' community. In east Tennessee, barrens are grass and herb-dominated sites which have shallow soil over limestone bedrock. These sites are similar in many ways to the barrens and glades of middle Tennessee and north Alabama, and are becoming increasingly uncommon in the Ridge and Valley physiographic province. No state- or federally-listed plants occur at the site, but because of the rarity of this community type in the region, it merits protection.

Large trees and high species diversity characterize the area surrounding the barrens. To the east of this site is a maturing oak/hickory/pine forest. While not of high significance regionally, this stand has large trees, few non-native species, and serves as an effective buffer to the adjacent limestone bluff. Significant disturbance to this stand would likely result in degradation of this high quality bluff community. In addition, this stand would enhance opportunities for passive recreation including hiking, photography, panoramic views, and nature appreciation. Improvements to this site, such as the upgrading of existing paths and posting of educational signs, would greatly increase the value of this unique feature. Hall Bend is the only area within the land planning parcels that is suitable for designation by TVA as a Small Wild Area. This site would be conveniently accessible by maintained roads presently in place on the Tellico Reservation.

3.4.2 Environmental Consequences

Terrestrial Ecology

Alternative A – Alternative A categorizes approximately 9592 acres under the Contract No. TV-60000A, Attachment A, as retained land uses of Natural/Wildlife Areas and Cultural/Public Use/Open Space Areas. Under Alternative A, most of this land could remain undeveloped and managed indefinitely for informal recreation. However, the current land use designations did not consider or provide for public input into the potential use of this land. Nor did the designations comprehensively consider the unique terrestrial characteristics or sensitive biological resources that occur on the land or how stakeholders use the natural resource amenities associated with these lands. With Alternative A, a large portion of TVA's retained land could remain undeveloped and managed indefinitely, primarily for informal recreation. However, future land use actions driven by TVA, TRDA, or other public or private entities could result in substantial impacts to terrestrial ecological resources on a localized basis.

Assuming no major changes in current land use patterns occur (triggered by development by TVA or TRDA as currently allowed on Cultural/Public Use/Open Space Areas), forested areas on Natural/Wildlife Areas and Cultural/Public Use/Open Space Areas designated lands would remain forested and continue to mature, with forest wildlife species remaining relatively stable at current levels. levels. The commercial recreation development associated with the Tellico Landing LLC project on TRDA's Lower Jackson Bend area (allocated for Commercial Recreation) will likely occur in the near future under this alternative resulting in the loss of some forest area and a change in wildlife use to species more adapted to manmade and altered environments. On other sites, as old fields and shrub areas continue to revert to forest, there will be a decrease in wildlife species dependent on these habitat types and a concomitant increase in forest wildlife species. Open lands licensed for hay crops or livestock grazing and the wildlife species using them would

likely remain unchanged. Agricultural license areas are considered "interim use" under the 1982 land use plan, and may be canceled at any time as the result of a TVA or TRDA action.

Under the current land use designations, TVA would continue to partner with QU to jointly manage upland habitats on the Carson Woods tract on a year-to-year basis. Expansion of this cooperative effort with QU and other conservation organizations and stakeholders onto other land parcels would be reactive and potentially restricted by competing land use requests. TWRA would continue to manage the TLWMA and the CWR in conjunction with TVA under a short-term revocable license agreement. According to TWRA, this license arrangement is currently precluding the development of additional long-term waterfowl habitat projects on CWR.

Any major changes in use patterns under the current land use designation system could create a corresponding change in vegetation and wildlife utilizing the affected tracts of land. For example, a change in use of the Carson Woods or Kennedy Branch/Ballplay Creek parcels from their current use as Cultural/Public Use/Open Space Areas (supporting hiking, informal camping, wildlife viewing, hunting, etc.) to developed Recreation (i.e., formal camping, golf course, public park, etc.) would create a major shift in vegetation and associated wildlife on the site, as well as the type of public use available to stakeholders. In general, increased development of these designated areas would result in a decrease in biological diversity over time on a reservoir-wide basis, with forest wildlife populations being the most impacted by the reduction in forest area and by the decrease in the average size of contiguous forested tracts (TVA, 1998a). However, under this alternative, the TLWMA and CWR, which comprise approximately one-third of the planned Cultural/Public Use/Open Space Areas acreage, would be committed to continued designation and management for wildlife habitat development by TWRA and TVA. Impacts to terrestrial ecology, wildlife habitat, and diversity would be insignificant with continued resource management and NEPA reviews of proposed future development of Cultural/Public Use/Open Space Areas. The cumulative impacts under this alternative would be considered insignificant on a regional basis.

Alternative B – Alternative B allocates 70 parcels of TVA land totaling 9956 acres to the categories of Sensitive Resource Management, Natural Resource Conservation, and TVA Project Operations. These three categories comprise approximately 79 percent of the retained land on Tellico Reservoir. Zone 2 parcels are included because of the existing natural habitats on these areas and the potential for enhanced resource management and associated public (stakeholder) use opportunities. The management of these parcels under Alternative B would be guided by written natural resources management unit plans that would:

- Develop and implement innovative and cost-effective strategies for maintaining and enhancing natural biological diversity.
- Manage and enhance sensitive natural resources.

- Provide for public use and enjoyment of forests, wildlife, and other natural resources on TVA lands.
- At appropriate locations, manage and produce natural resources-derived products (game and timber), consistent with TVA's multiple use and environmental leadership objectives.

These unit plans would be developed and reviewed with stakeholder input to manage natural resources consistent with sound biological practices and valid stakeholder needs. TVA would seek to maintain a high level of biological diversity in the terrestrial environment by managing a mix of forest land, open land, wetland, and riparian communities. This would provide a diversity of wildlife species which use these communities (see Appendix C-2, Table C-2.1). For example, vegetation may be managed in some forest stands to improve the diversity of tree species and sizes, release fruit- and nut-producing trees, develop small wildlife openings, and protect snags and wildlife nesting cavities. Open lands would be managed to provide a vegetation mix ranging from planted native warm season grasses to grown up, old fields and shrub edges.

Under Alternative B, TVA could maintain or change the current mix of terrestrial communities based on natural resource and stakeholder requirements. This alternative allows long-range planning (10 to 20 years) and implementation of terrestrial resource management schedules. This approach would result in long-term protection and improvement of terrestrial resources on a local basis. Any negative management impacts would be temporary and insignificant. The forested area on the planned tracts would likely remain fairly constant or slightly increase over time. On a reservoir-wide basis, some loss of forest area, and additional fragmentation of the remaining forest, would likely occur as a result of residential and other development. For example, since there is no change in land allocation for TRDA's Lower Jackson Bend, the commercial recreation development associated with the Tellico Landing LLC project will also likely occur in the near future under this alternative resulting in the impacts described above.

Alternative B would provide for enhanced management and protection of terrestrial ecological resources on Tellico Reservoir properties. This would result from a longer commitment of certain land parcels to specific designations such as Sensitive Resource Management and Natural Resource Conservation. Also, the subsequent development of unit management plans would maintain and enhance natural biological diversity on these parcels. Selection of this alternative would result in insignificant negative impacts on terrestrial ecological resources on a regional and cumulative basis, and consequently improved future protection and management of terrestrial resources, wildlife habitat, and diversity on a reservoir-wide basis.

Significant Natural Features

Alternative A – Under Alternative A, the internal TVA environmental review process would continue to address impacts to sensitive resources. As classified in

the Tellico Reservoir existing plan land use designation definitions (Table 2.2.1-1), Hall Bend is designated to be managed under the Dam Reservation lands. This is land that is managed primarily for the protection of the dam and the associated switchyards and power lines. The Upper Baker Creek canebreak community is designated as a Cultural/Public Use/Open Space Area and managed to protect and enhance cultural and scenic attributes of the subject area.

Under Alternative A, sensitive areas may be protected, however, this would not be a specific goal for the management of these parcels. There would be little long-term assurance of the protection of these features.

Alternative B – Under Alternative B, the internal TVA environmental review process would continue to address impacts to sensitive resources. Alternative B provides enhanced protection of significant natural features and plants and animals utilizing parcels allocated to Zones 3 and 4. The allocation of the Upper Baker Creek area, Parcel 39, to Zone 3 - Sensitive Resource Management, gives this unusual canebreak community an enhanced level of protection. The Hall Bend site, a portion of Parcel 1, is allocated to Zone 2 - Project Operations. This zone offers a level of protection similar to that previously available under Alternative A. Due to the distance from the Tellico Landing LLC project, there will be no cumulative impacts on Upper Baker Creek canebreak plant community. There will be no direct cumulative impacts on Hall Bend cedar glade due to the distance from the Tellico Landing LLC project. Tellico Landing property is within foreground views of Hall Bend. Minor impacts to the viewshed from commercial development are anticipated.

3.5 Wetlands/Riparian Ecology

3.5.1 Affected Environment

As defined by TVA Environmental Review Procedures:

> Wetlands are those areas inundated by surface or groundwater with a frequency sufficient to support, and under normal circumstance, 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 (TVA, 1983).

Wetlands along TVA's reservoirs tend to be diverse and highly-productive components of the overall reservoir ecosystem and are considered the normal circumstance under current reservoir operation scenarios. They provide habitat for many wildlife species, serve as shoreline stabilization zones, support rare plant species, aid in flood control, and contribute to improved water quality. Wetlands are typically transitional ecosystems between terrestrial and aquatic communities. In the Ridge and Valley Province, lower slope/terraced lands and floodplains represent a small percentage of the landscape relative to the uplands, mainly due to the geology

of the region (Martin, 1989). They were, however, substantially more widespread prior to impoundments on the Tennessee River and its tributaries (Martin, 1989). TVA's impoundments inundated the previous riverine and upslope habitats creating new wetland areas and many miles of terrestrial shoreline riparian habitat (Amundsen, 1994).

Wetlands in the Tellico Reservoir area were inventoried from aerial photographs in the early 1990s (TVA, 1998a). This inventory showed about 180 acres of wetlands within the normal reservoir drawdown zone, 687 acres of wetlands between the summer operating range and the maximum shoreline contour (msc), and 145 acres of wetlands in the area between the msc and one-fourth mile inland from the msc. The majority of the wetlands within the drawdown zone were aquatic bed wetlands; while the majority of wetlands in the other zones were forested and scrub/shrub wetlands. A separate, more recent inventory of the residential access shoreline (69 miles) found that about one fourth of this shoreline supports wetland vegetation.

The Tellico Reservoir land being planned, which includes lands below the 820 msc fronting TRDA developed residential and industrial areas, supports approximately 900 acres of wetlands, found in over 700 locations scattered along the length of the system. Most wetlands are located below the 820 msc, with many found immediately adjacent to the summer water level shoreline. The most significant and largest wetlands are found in the backs of shallow coves and embayments, especially where creeks and rivers enter the reservoir. This approximate 7 percent of the TVA-retained property on Tellico Reservoir is disproportionately high in ecological importance when the functions and values of these wetland areas are considered. A variety of wetland types are represented with emergent, scrub/shrub, and forested, as described by Cowardin, et al. (1979), being the most common.

Common vegetation associated with these wetlands includes:

- common cattail
- soft rush
- various sedges
- buttonbush
- black willow
- brookside alder
- green ash
- lizard's tail
- soft-stem bulrush
- smartweed
- lead bush
- silky dogwood
- red maple
- sycamore

Aquatic bed wetlands, comprised primarily of Eurasian watermilfoil, naiads, and parrotfeather, are found in some years primarily in the Tellico River arm of the reservoir and the upper end of the reservoir near the mouth of Citico Creek.

In addition to supporting plant community diversity, Tellico wetlands and adjacent shallow waters provide habitat for a variety of waterfowl, wading bird, songbird, amphibian, reptile, and mammal species.

Common waterfowl/wetland birds using these habitats for feeding areas, resting cover, and/or breeding areas include:

- wood duck
- mallard
- mergansers
- killdeer
- American woodcock
- Canada goose
- American black duck
- sora
- common snipe

Common wading/water birds include:

- great blue heron
- black-crowned night-heron
- gulls
- double-crested cormorant
- green-backed heron
- common loon
- osprey

Songbirds include:

- red-winged blackbird
- common yellowthroat
- blue-gray gnatcatcher
- swamp sparrow
- yellow warbler
- northern parula

Amphibians include:

- bullfrog
- green frog
- American toad
- spring peeper
- western chorus frog
- dusky salamander

Common reptiles include:

- northern water snake
- snapping turtle
- painted turtle

Mammals known to use wetland and riparian areas include:

- muskrat
- mink
- beaver
- raccoon

Additional species are listed in Appendix C-2 Table C-2.1.

Some of the most significant Tellico Reservoir wetlands are found in the upper reaches of Ballplay, Citico, Baker, and Notchy Creeks, and along the upper reaches of the Tellico River arm, especially between River Miles 15.5 and 17.5. A large wetland complex associated with two large beaver ponds is located on the easternmost portion of the Tellico Dam Reservation adjacent to Watts Bar Reservoir. These areas are a mosaic of forested, scrub-shrub, and emergent wetlands, and in some years have adjacent shallow water aquatic bed habitat. High quality habitat for numerous wildlife species is provided by these areas. Additional wetland functions include shoreline stabilization, water quality, plant community diversity, and landscape diversity. Values associated with these functions include wildlife observation and study, hunting, and visual aesthetics.

3.5.2 Environmental Consequences

Alternative A – Through the shoreline categorization process, about 5 miles of residential access shoreline identified as supporting wetland vegetation were placed in the Residential Mitigation Zone, where private water use facilities could be permitted with appropriate mitigation. The protection of riparian habitats would also be increased in the other 33 miles of Residential Mitigation shoreline and in the mile of shoreline in the Shoreline Protection category.

The approximate 700 wetland areas (900 acres) located on TVA-retained land on Tellico Reservoir are found in most all of the current land use designation categories. Under Alternative A these areas would most likely remain largely unchanged, although some emergent wetlands may gradually mature to shrub/scrub wetlands. Wildlife species using these areas should remain unchanged (see Appendix C-2, Table C-2.1). Even though the current land use designation could change on these areas under Alternative A, this action would be subject to TVA NEPA review and compliance with Executive Order (EO) No. 11990 (Protection of Wetlands). EO No. 11990 directs federal agencies to minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

Selection of Alternative A would have an insignificant impact on wetlands and associated functions and values on a regional or subregional basis. Wetlands located on areas currently designated for Dam Reservation or Industrial Development, while protected from most direct impacts through compliance with EO No. 11990, could suffer indirect impacts to some functions and values on a local basis. The shoreline below the 820 msc fronting the proposed Tellico Landing LLC project at TRDA's Lower Jackson Bend currently supports approximately 1 acre of forested and scrub/shrub wetland. Direct impacts to these wetlands will be avoided through the Section 26a permitting process for shoreline facilities associated with adjoining commercial recreation development. Because of the requirements of EO No. 11990 and the residential shoreline wetland categorization system required by the SMP, cumulative impacts to wetlands on a reservoir or regional basis would be insignificant.

Impacts to wildlife dependent on wetlands would also be insignificant. As described in the SMI EIS (TVA, 1998a), some loss of suitable habitat for wintering waterfowl would result through residential development on former TVA lands and on shorelands with deeded access rights. Because the current land uses of many of the areas on the reservoir with high quality waterfowl habitat would likely continue, overall effects on wintering waterfowl would likely be minor.

Alternative B – The protection of wetlands and riparian habitats (in Zone 7) as a result of the shoreline categorization, described under Alternative A, would also occur under Alternative B. Alternative B would also allocate approximately 260 acres of wetlands with especially substantial ecological functions and values to Sensitive Resource Management (Zone 3). The remaining 640 acres of wetlands are

scattered across the other zone designations, with approximately 75 percent found in Zone 4. Zone 3 and 4 areas, along with portions of Zone 2, would be part of TVA's unit planning process as described in Section 3.4.2. This planning process would emphasize sensitive natural resources on TVA lands and develop management strategies to preserve and enhance the functions and values of these wetland resources. Under this scenario, wetlands would be managed to protect and/or enhance the hydrology, soils, and vegetation of each wetland system to improve overall functions and values. Riparian communities would be managed to allow the natural development of native vegetation or restored through bioengineering where shoreline erosion is impacting these areas.

Selection of Alternative B would provide a beneficial effect to wetland resources on TVA lands and best protect current wetland functions and values. Impacts on wetlands and riparian resources associated with the public recreation projects proposed in Alternative B are expected to be minor and insignificant on a reservoir and regional basis, as highly functional wetlands are not found on the proposed recreational areas. This is the case with the approximate 1 acre of wetland located below the 820 msc fronting the proposed Tellico Landing LLC project at TRDA's Lower Jackson Bend area. Direct impacts to these wetlands would be avoided through the 26a permitting process for shoreline facilities associated with adjoining commercial recreation development. Wetlands and riparian habitats located along the upper Tellico River would be further protected and enhanced through the River Corridor designation. Protective guidelines for shoreline development associated with backlying landowners with ingress/egress rights are also proposed. In addition to the protection and enhancement of wetlands located in Zones 3 and 4, development and implementation of unit resource management plans and the requirements of EO 11990, the implementation of the residential shoreline wetland categorization system required by the SMI would result in insignificant, cumulative impacts to wetlands on a reservoir and regional basis.

Impacts to wildlife dependent on wetlands would likely be beneficial because of the long-term commitment of additional lands for natural resource protection and enhancement. As described in the SMI EIS, some loss of suitable habitat for wintering waterfowl would result through residential development on former TVA lands and on shorelands with deeded access rights. This decrease, however, could be offset through enhanced waterfowl management on lands allocated to Zones 3 and 4.

3.6 Recreation

3.6.1 Affected Environment

Recreation on Tellico Reservoir is influenced in large part by the surrounding urban areas, the planned residential development around the reservoir, and the population from the adjoining communities and counties. The reservoir setting offers a blend of beautiful mountain scenery as a backdrop to a lake area easily accessible by a regional population in the counties of Blount, Loudon, Monroe, and Knox estimated

to be in excess of 525,000 and projected to increase to over 650,000 by the year 2010. Demands for water-based recreational activities are expected to increase as a result of continuing residential development of privately-owned land around the reservoir and the anticipated population increases. The President's Commission on Americans Outdoors (1986) and Governor's Commission on Tennesseans Outdoors (1986) reports recognized that opportunities for development of recreational corridors utilizing greenways and waterways were quickly disappearing and their designation/development would help meet recreational needs of the 21st century.

There are two marinas, 14 well-dispersed public boat ramps, and several tracts of land on which TVA has sold or provided land rights to the TRDA, TWRA, and local agencies for development and management of public and commercial recreation areas. TRDA has existing rights to manage its land for public and commercial recreation purposes, and rights to use TVA property below the 820 msc. The Plan does not change these rights, and the proposed Tellico Landing LLC development is located on property (Lower Jackson Bend) where these rights exist. In addition, the TDEC manages the 850-acre Fort Loudoun State Historic Park for public recreation, wildlife management, and historic and scenic preservation purposes. The Eastern Band of the Cherokee Indians manages the Sequoyah Birthplace Museum located near the state park. Some of these tracts are not yet fully developed or utilized.

Based on comments provided to TVA through a questionnaire about Tellico Reservoir, the primary percentage of recreational activity preferences as expressed by respondents are waterskiing (88 percent), boat fishing (85 percent), pleasure boating (84 percent), boat launching (82 percent), swimming (80 percent), marina/boating (76 percent), and bank fishing (73 percent). Over 51 percent of respondents reported that if appropriate facilities were provided, they would participate in bike riding, camping at developed sites, hiking, horseback riding, special events, or swimming in designated areas. Informal recreation occurs at numerous locations where public access exists. Among other planning priorities, questionnaire respondents indicated TVA should place a high priority on boat ramps and land uses associated with maintaining the natural character of reservoir property. They also expressed that TVA should not be involved in boat stack storage or theme parks.

3.6.2 Environmental Consequences

Alternative A – A large portion of TVA's retained land on Tellico Reservoir has allocations designated in 1982 which provide for informal public recreation such as bank fishing, bird watching, camping, and hiking. These allocations are primarily comprised of the land within the Cultural/Public Use/Open Space Areas and Natural/Wildlife Areas which encompass 9592 acres. This land could remain undeveloped and managed indefinitely for informal recreation. With the exception of the Tellico Dam Reservation, the only other reservoir property designated for recreational development has been conveyed to TRDA for management or the private sector. Although there is no TVA property allocated specifically for public or commercial recreational development, the land currently allocated Cultural/Public Use/Open Space Areas could be considered for development by TVA, another public

agency, or the private sector as demand dictates. If the land is made available for non-TVA development and management as defined in Contract No. TV-60000A. TRDA would have right of first refusal.

The current land use designations did not comprehensively consider public input, the scenic qualities, unique characteristics, cultural or sensitive biological resources which affect how land could or should be utilized. Continuing to use the 1982 land use designations precludes comprehensive public input and an application of broad public values. The cumulative effects of selecting this alternative could result in less than optimal allocation of lands for recreation and some reduction in potential long-term recreational benefits on Tellico Reservoir. The commercial recreation development associated with the Tellico Landing LLC project on Lower Jackson Bend will likely occur in the near future under this alternative generating some increase in recreational use around the reservoir.

Alternative B – Alternative B comprehensively addresses the existing physical characteristics of land being planned around Tellico Reservoir, current recreational use patterns, public input, anticipated recreational needs, and public values pertaining to recreational use of this property. Existing commitments for land rights to public agencies and the private sector remain intact and are not adversely affected. Changes in management of some existing recreational areas or expressions of interest from other public agencies have created opportunities to consider new recreational uses and the potential for additional recreational development. This is reflected with specific allocations which increase the land committed for recreational use from 1500 acres in Alternative A to 1803 acres (an addition of approximately 20 percent) in Alternative B.

Primary additions include allowing for development of a Greenway on the lower portion of Tellico Reservoir from Little Tennessee River Miles 4.7-9.5. The Greenway could potentially create 6-10 miles of trails for a variety of public uses including hiking and/or horseback riding, and provide better access to public land. In association with the Greenway, three to five points of ingress/egress are envisioned for parking and restrooms throughout the Greenway segment, with a primary service node midway at Coytee Springs. Coytee Springs (Parcel 10) is envisioned as a stand-alone, day-use park area which could serve area residents, as well as be a component of the Greenway. Other primary recreation allocations would provide for expanded public and commercial recreation development opportunities within Vonore to serve both the Eastern Band of the Cherokee Indians' interest to develop a resort and future local public park development.

Improved access to the riverine portion of the reservoir is proposed on the Tellico River with a lake-oriented access area at Tellico River Mile (TRM) 12.0, and a canoe/small boat access area at TRM 18.3. These allocations would enhance public access to the river and also lend support to the designation of a portion of the Tellico River as a "River Corridor" for 7.4 river miles from TRMs 13.3-20.7. The "River Corridor" designation creates specific guidelines for development of private water

use facilities which are intended to preserve as much of the natural character of the river as possible, as well as provide reasonable access to the river by property owners with landrights. This designation would help maintain plant and animal habitat, reduce vegetation removal minimizing future shoreline erosion, provide a passive/natural environment for recreational boating and fishing, and create opportunities for compatible development within an area of the reservoir which has basically remained in a pristine state. Guidelines for facility development within three River Corridor segments are proposed (Appendix B-1) for the lower river segment (TRM 13.3 to 15.1), middle river segment (TRM 15.1 at Sloan Bridge to TRM 18.5), and upper river segment (from TRM 18.5 to the upper limits of TVA landrights at TRM 20.7). The "River Corridor" private water use facilities guidelines identify the types and sizes of facilities recommended within each of these segments.

Informal recreation use is a component of, and a compatible use within, Zone 3 (Sensitive Resources) and Zone 4 (Natural Resource Conservation) and can be accommodated on an interim basis within other zones, until the specific allocated use is defined, such as Residential or Industrial Development, and occurs on that land. Alternative B will result in allocations of 9321 acres for Zones 3 and 4. When these two zones are compared to comparable zones (Cultural/Public Use/Open Space Areas and Natural/Wildlife Areas, with 9592 acres) receiving informal recreation use in Alternative A, this results in a 2.8 percent reduction of informal recreation use land (271 acres). However, future recreational development land needs have been considered based on public input and agency responses resulting in the allocation of 274 acres in Zone 6 (Recreation) which should meet future public recreational demand more comprehensively.

The cumulative effects of selecting this alternative would create additional recreational benefits and provide new public recreational opportunities where population growth is anticipated and recreational uses can complement the physical resource. Although this would result in a reduction in land currently available for informal recreational use, the proposed allocations are long-term and well-dispersed around the reservoir and should not significantly affect informal uses. Since there is no change in a land allocation for Lower Jackson Bend, the commercial recreation development associated with the TLI project will also likely occur in the near future under this alternative generating some increase in recreational use around the reservoir.

3.7 Water Quality

3.7.1 Affected Environment

Watershed Description – Tellico Reservoir is located in Little Tennessee River watershed in both the Blue Ridge and the Ridge and Valley Provinces. The watershed encompasses 2,627 square miles in North Carolina, Tennessee, and

Georgia. The upper 75 percent of the watershed consists of mountainous terrain characterized by steep slopes and heavy forest cover. Runoff from this area is controlled by dams above Tellico Reservoir on the Little Tennessee River and several of its upstream tributaries. The remainder of the watershed consists of the minor tributaries draining directly into the reservoir (365 square miles) and the Tellico River watershed (285 square miles). The Tellico River watershed is primarily rugged terrain and the minor tributaries drain an area consisting of more gently rolling hills (TVA, 1985a; TVA, 1981). Approximate land use in the Little Tennessee watershed is 83 percent forest, 12 percent pasture, 3 percent water, and 2 percent cropland (TVA, 1996a).

Hydrologic Units – Hydrologic Unit Codes (HUCs) are assigned by the U.S. Geological Survey to watersheds ranging in size from the two-digit region codes to the smaller eight-digit cataloging units. The Little Tennessee River watershed is divided into two cataloging units called the Lower Little T (06010204) and the Upper Little T (06010202). TVA manages watershed initiatives that are based on conditions of watersheds using input from stakeholders, coalitions, local governments, and state and federal agencies. Initiatives are undertaken to maintain or improve stewardship practices, land and water quality, biological health and diversity, recreational opportunities, use of best management practices (BMPs), and the establishment of riparian and ecological corridors that link landscape features and inhabitants. HUCs or watersheds that drain into Tellico Reservoir are ecologically rated as poor, fair, or good (Figure 3.7-1). Appendix C-3 includes the HUC number, the primary stream draining the HUC, condition of the HUC, the primary resource issues associated with the respective HUC rating and TVA land parcels within that HUC. Ratings are based on the professional judgment of TVA land and water resource specialists after consideration of Index of Biotic Integrity (IBI) sampling results, condition of aquatic habitats in the watersheds, and land uses. Although both systems use three levels of designation, HUC ratings (i.e., good, fair, or poor) are not directly comparable to state water quality designations which identify streams as either impaired, partially impaired, or unimpaired for various use categories. Approximately 49 percent of the acreage of TVA land being planned is in watersheds with fair HUC rating (see Appendix C-3). The remaining land is in watersheds rated poor.

Climatology – Mean annual precipitation in the lower Little Tennessee River watershed below Chilhowee Dam ranges from 51.8 inches to 55.4 inches, while mean annual precipitation in the upper reaches of the watershed above Chilhowee can exceed 90 inches. Mean monthly precipitation is relatively constant, with a tendency toward maximum rainfall in March and minimum rainfall in October. The mean annual air temperature at the National Weather Service station in Lenoir City is 58.2ºF. Mean monthly temperatures range from 38.7ºF in January to 77.3ºF in July (TVA, 1981).

Reservoir Description – Tellico Dam was the last dam completed in the TVA system, with dam closure in 1979. It is located at Little Tennessee River Mile

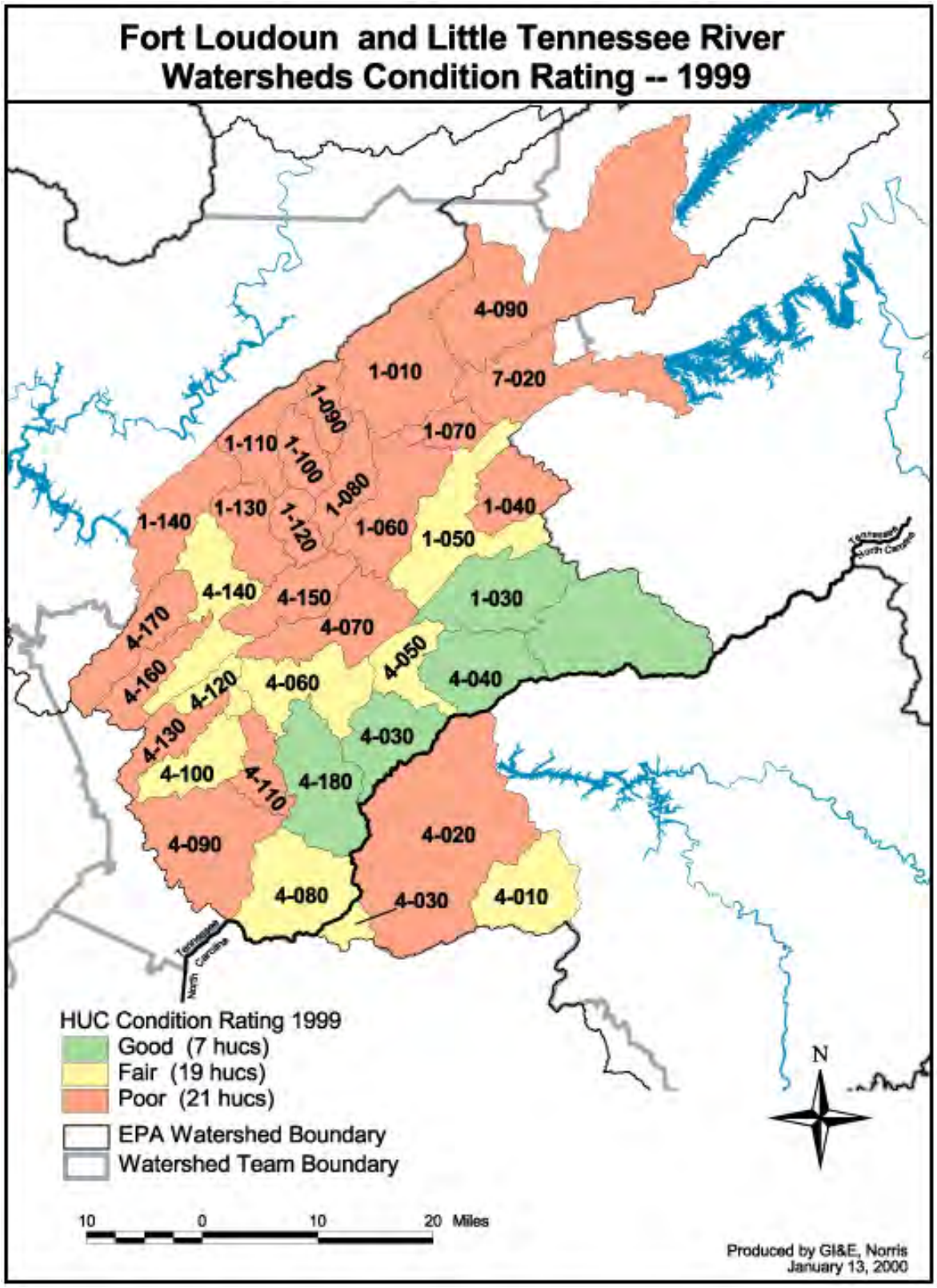
(LTRM) 0.3, just upstream of the confluence of the Little Tennessee and Tennessee Rivers. Tellico Reservoir extends 33 miles up the Little Tennessee River to Chilhowee Dam and 18 miles up the Tellico River. It has 361 miles of shoreline and has a surface area of approximately 16,500 acres at summer operating range. Reservoir depth ranges from 82 feet near the dam (forebay) to more riverine conditions upstream near Chilhowee Dam. The normal fluctuation between the summer operating range and the winter operating range is 6 feet. The average flow for the period of record is 6213 cubic feet per second with an average retention time of approximately 37 days. Very little of the water is discharged through Tellico Dam. Instead, it is routed through a navigation canal to Fort Loudoun Reservoir near the dam for hydroelectric generation (TVA, 1985b; TVA, 1981).

General Water Quality Characteristics – Tellico Reservoir is generally considered a low productivity reservoir (oligotrophic) with low nutrient and biochemical oxygen demand concentrations due to the geologic characteristics of the region. The upstream reach (LTRMs 20.0 to 33.6) receives primary inflow from Chilhowee Reservoir and is essentially riverine with water quality similar to the Chilhowee release (cold and nutrient poor with low mineral content). The middle reach of the reservoir (LTRMs 3.0 to 20.0) is deeper and wider, receiving inflow from the Tellico River as well as from Chilhowee. This segment of the river has a greater volume and a longer residence time than the upper reach, and water quality is more influenced by internal reservoir processes. Water quality in the downstream reach of the reservoir (LTRMs 0.3 to 3.0) is influenced not only by local inflows and internal reservoir processes, but also by the hydrodynamics and exchange of water through the canal connecting Tellico and Fort Loudoun Reservoirs (TVA, 1981). The canal is only 20 to 25 feet deep and the Tellico forebay is 82 feet deep. The result is that water at strata below the 25-foot depth is essentially trapped and becomes anoxic during much of the summer (TVA, 1998b).

Recent TVA Water Quality Monitoring and Results – TVA's reservoir (and stream) monitoring programs were combined with fish tissue and bacteriological studies in 1990 to form an integrated Vital Signs Monitoring Program designated to systematically monitor reservoir ecological conditions. Vital Signs Monitoring activities focus on:

(1) physical/chemical characteristics of waters
(2) physical/chemical characteristics of sediment
(3) benthic macroinvertebrate community sampling
(4) fish assemblage sampling

Figure 3.7-1 Fort Loudoun and Little Tennessee River Watershed Condition Rating - 1999



The monitoring program includes two sampling sites in Tellico Reservoir, the forebay located at LTRM 1.0 and the mid-reservoir transition zone located at LTRM 15.0 (LTRM 21.0 in 1990, 1991, and 1992) (TVA, 1996b).

Vital Signs Monitoring ratings of the overall ecological condition of Tellico Reservoir have been fair since the program began. Table 3.7.1-1 shows water quality ratings from Vital Signs Monitoring data. The water quality indicator which has shown the most variation over time is dissolved oxygen (DO) at the forebay location, which rated good in 1994, poor in 1995, fair in 1997, and good in 1999 (Tellico was not sampled in 1996 or 1998). DOs in the forebay are strongly correlated with reservoir flow. 1995 was a very low flow year due to low runoff during an extremely dry spring and summer, and efforts to fill Fontana Reservoir. Chlorophyll also received a poor rating at the forebay location in 1995 because of the low flows, which increased residence time, and the inflow of chlorophyll-rich water from Fort Loudoun via the canal. Sediment at the forebay station was rated fair instead of good due to measurements of Aldrin and Dieldrin above recommended guidelines. All water quality parameters at the transition zone location rated good during 1995 (TVA, 1996b; TVA, 1998b).

Table 3.7.1-1 Water Quality Ratings, Vital Signs Monitoring Data

Location & Elements Monitored	Monitoring Years			
	1994	**1995**	**1997**	**1999**
Forebay				
Dissolved Oxygen	good	poor	fair	good
Chlorophyll	fair	poor	poor	good
Sediment	fair	fair	good	good
Mid-Reservoir				
Dissolved Oxygen	good	good	good	good
Chlorophyll	good	good	fair	poor
Sediment	fair	good	good	good

Tellico was not sampled in 1996 or 1998.

In addition to the fair DO rating at the forebay location, 1997 monitoring there resulted in poor chlorophyll and good sediment ratings. Transition zone ratings were good for DO and sediment, but for the first time since monitoring began, chlorophyll was rated fair instead of good. Another occurrence seen for the first time in 1997 was a small area of low DO in water near the bottom at the transition zone during the summer (TVA, 1998b).

Chlorophyll concentrations have shown an upward trend at both locations during the last seven years. At the forebay, chlorophyll concentrations are impacted by the exchange of water from the highly productive Fort Loudoun forebay via the canal. However, no such influence exists at the transition zone location, where average

summer chlorophyll levels have increased about 140 percent from 1993 to 1999. The increased chlorophyll level means an increase of algal growth which may be due to increased nutrient loading in the reservoir (TVA draft data).

TVA did not conduct bacteriological sampling on Tellico Reservoir in 1995 or 1997. TVA monitored fecal coliform bacteria levels at four beaches in 1998. All were within State of Tennessee guidelines for water contact, except for elevated bacteria levels in one of the ten samples collected at the Toqua site following a rainfall event (TVA draft data). There are no water contact advisories for Tellico issued by the state of Tennessee.

Recent Evaluations by the State of Tennessee – The 1996 TDEC water quality assessment report, known as the 305(b) Report, listed all of Tellico Reservoir as impacted/not supporting designated stream use classifications. Listed causes were priority pollutant organics, organic enrichment/DO, nutrients, siltation, and flow alteration resulting from some combination of sources including runoff from pasture land, land development, impoundment and hydroelectric generation, and contaminated sediment. Tributaries to the reservoir listed in the 305(b) Report either as not supporting or only partially supporting stream use classifications were Fork Creek, Baker Creek, Notchy Creek, and Abrams Creek (TDEC, 1996). The state 305(d) List, established as part of the Total Maximum Daily Load (TMDL) Program, also included all of Tellico Reservoir as not supporting use classifications due to PCBs found in contaminated sediment (TDEC, 1998). Additional nonsupporting tributaries identified by the Tennessee Rivers Assessment Program due to water quality problems were Island Creek and Ninemile Creek (Tennessee Rivers Assessment Program, 1998).

3.7.2 Environmental Consequences

Alternative A – Under this alternative, few tracts of TVA property are designated specifically for protection of sensitive resources, and the extent of protection of natural resources in other designations (such as the Cultural/Public Use/Open Space Areas) would be uncertain. Although protection of the natural reservoir shoreline may be undertaken as a secondary consideration on tracts designated for various uses, including natural resource protection or conservation, the resulting benefits to reservoir water quality may not be a primary consideration when land use decisions are made.

Under Alternative A, the extent to which land uses under the existing plan might affect water quality depends on the nature and extent of development. Under this alternative, future land use and development on parcels within the 1982 land use plan is less restricted. Additional residential, industrial, and recreational developments on either TVA or private property have the potential to result in some degree of increased soil erosion due to clearing of woody vegetation and brush, increased runoff of agricultural/lawn chemicals, increased sewage/septic loading, and an increase in currently unknown contaminants if additional point source permits are issued on the reservoir. Negative impacts to water quality associated with these

activities include increased turbidity, increased levels of substances toxic to aquatic life, increased bacteriological content, and further increases in nutrient loading which is already occurring in the reservoir.

Use of vegetated buffer zones and other best management practices would minimize some damaging effects of riparian vegetation removal associated with development. In addition, protective measures presently in place under TVA's permitting process, and included in TVA's Shoreline Management Policy (SMP) (TVA, 1998a), will substantially offset impacts of development of private property. New facilities with permitted discharges would be required to meet permit limits as well as possible future TMDL limits. With knowledge of the condition of the reservoir, activities under Alternative A should not significantly impact water quality.

Alternative B – This alternative would provide a better opportunity to protect water quality by identifying Sensitive Resource Management or Natural Resource Conservation (Zones 3 and 4, respectively) as the designated use on some tracts now having general designations such as Cultural/Public Use/Open Space Areas. Any of the proposed uses of Zone 3 or 4 lands would allow for protection of water quality either due to less development or use of best management practices to minimize negative impacts. Allocation of other parcels for future developed recreational activities or other public access/use areas would allow TVA control over development to minimize adverse impacts.

Shoreline development on private property, as described under Alternative A, will likely increase under either alternative. Additional Industrial/Commercial, Recreation, and Residential Access (Zones 5, 6, and 7, respectively) have the potential to result in some degree of increased soil erosion due to clearing of woody vegetation and brush, increased runoff of agricultural/lawn chemicals, increased sewage/septic loading, and an increase in currently unknown contaminants if additional point source permits are issued on the reservoir. Negative impacts to water quality associated with these activities include increased turbidity, increased levels of substances toxic to aquatic life, increased bacteriological content, and an increase in nutrient loading which is already occurring in the reservoir.

While water quality impacts resulting from uses of TVA lands would be minimized under either alternative with proper controls, this alternative limits development and ensures that other activities such as developed recreational use, timber harvesting, or other conservation uses would be conducted with protection of natural resources as an objective.

3.8 Aquatic Ecology

3.8.1 Affected Environment

Aquatic habitat in the littoral (near shore) zone is greatly influenced by underwater topography and backlying land use. Underwater topography at Tellico Reservoir

varies from moderately steep, with scattered small bluffs near the river channel, to typically shallower in embayments, coves, and areas further from the river channel and tributary stream channels. Undeveloped shoreline is mostly wooded, so fallen trees and brush provide woody cover in those areas. Woody habitat is usually reduced on TVA and non-TVA lands where backlying property is largely residential or agricultural. The standing timber that was left in the Tellico River arm of the reservoir, and in other isolated areas, provides good woody cover and is unique to TVA reservoirs in the area. The cold water discharges from Chilhowee Dam allow a trout fishery to be maintained in upper reaches of Tellico Reservoir.

As part of the data collection effort for the SMI EIS, a survey was conducted on Tellico Reservoir by TVA to arrive at a shoreline aquatic habitat index (SAHI) score which would indicate the quality of aquatic habitat conditions adjacent to various land uses. Scoring parameters (metrics) included seven physical habitat parameters (i.e., riparian zone condition, amount of canopy cover, bank stability, substrate composition, amount of cover, habitat diversity, and degree of slope) important to Tennessee Valley reservoir resident sport fish populations which rely heavily on shoreline areas for reproductive success, juvenile development, and/or adult feeding. Field methods and the SAHI rationale are described in Appendix G of the SMI EIS (TVA, 1998a). The overall average SAHI score at Tellico was 22.2 (of a possible 35), which indicates generally "fair" shoreline aquatic habitat within the reservoir. Average SAHI scores were higher adjacent to lands currently allocated for Natural/Wildlife Areas (SAHI 27 = "good"), and Cultural/Public Use/Open Space Areas (SAHI 24 = "fair"); SAHI scores adjacent to all other allocated uses averaged 14 or 15 ("poor").

Rock is an important constituent of littoral aquatic habitat over much of the reservoir, either in the form of bedrock outcrops or a mixture of rubble and cobble on steeper shorelines or gravel along shallower shorelines. Substrate and available aquatic habitat in coves and embayments also typically correspond to shoreline topography and vegetation. In recent years, aquatic vegetation has covered about 250 acres–a relatively small amount of the reservoir (TVA, 1998b). In areas characterized by residential development, habitat includes man-made features such as shoreline stabilization structures (e.g., seawalls or riprap) and docks. Fallen trees are less numerous in residential areas.

TVA began a program to systematically monitor the ecological conditions of its reservoirs in 1990. Previously, reservoir studies had been confined to assessments to meet specific needs as they arose. Reservoir (and stream) monitoring programs were combined with TVA's fish tissue and bacteriological studies to form an integrated Vital Signs Monitoring Program. The following descriptions of Tellico Reservoir's existing condition are based primarily on results from this program.

Benthic Community – Benthic macroinvertebrate (e.g., lake bottom-dwelling, readily-visible, aquatic worms, snails, crayfish, and mussels) samples were taken in two areas of Tellico Reservoir in 1994, 1995, 1997, and again in 1999, as part of

TVA's Reservoir Vital Signs Monitoring Program. Areas sampled included the forebay at LTRM 1.0, and a mid-reservoir transition station at LTRM 15.0. Bottom-dwellers are included in aquatic monitoring programs because of their importance to the aquatic food chain, and because they have limited capability of movement, thereby preventing them from avoiding undesirable conditions. Sampling and data analysis were based on seven parameters (eight parameters prior to 1995) that indicate species diversity, abundance of selected species that are indicative of good (and poor) water quality, total abundance of all species except those indicative of poor water quality, and proportion of samples with no organisms present. Collection methods and rating criteria were different prior to 1994, so those results are not compared directly to samples taken using current methods.

As shown in Table 3.8.1-1, the benthic community in Tellico Reservoir rated from poor to very poor in comparison to other run-of-the-river reservoirs. The mid-reservoir transition station rated poor in 1994 and 1995, very poor in 1997, and poor in 1999. Of the seven parameters used to evaluate the benthic community, six received the lowest possible rating at both sites in 1997 (TVA, 1998b). In 1999 only twelve organisms were collected from each site; mostly chironomids and oligochaetes, and a few clams (TVA draft data). Definitive causes of such a poor benthic community are not known, but discharges from Chilhowee Dam are cold, nutrient poor, and have a low mineral content–all conditions that are not conducive to establishing a diverse, abundant aquatic community. Another possible contributor to the very low scores is that the scoring criteria used to evaluate the benthic community in Tellico are the same as for the mainstream Tennessee River reservoirs, which rarely experience low DO levels (TVA, 1998b).

Table 3.8.1-1 Benthic Community Ratings, Vital Signs Monitoring Data

Station	Monitoring Years			
	1994	**1995**	**1997**	**1999**
Forebay	very poor	very poor	very poor	poor
Mid-reservoir	poor	poor	very poor	poor

Fish Community – The Reservoir Vital Signs Monitoring Program included annual fish sampling at Tellico Reservoir from 1990 through 1995 and in 1997 and 1999. The electrofishing and gill netting sampling stations correspond to those described for benthic sampling. Beginning in 1993, the transition zone sampling location was moved to its present location at LTRM 15.0, which is more characteristic of a transition environment rather than the riverine conditions present nearer Chilhowee Dam.

Fish are included in aquatic monitoring programs because they are important to the aquatic food chain and because they have a long life cycle which allows them to reflect conditions over time. Fish are also important to the public for aesthetic, recreational, and commercial reasons. Monitoring results for each sampling station

are analyzed to arrive at a Reservoir Fish Assemblage Index (RFAI) ratings which are based primarily on fish community structure and function. Also considered in the rating is the percentage of the sample represented by omnivores and insectivores, overall number of fish collected, and the occurrence of fish with anomalies such as diseases, lesions, parasites, deformities, etc. (TVA, 1997). A more detailed explanation of the RFAI is included in Appendix C-4.

The vital stations fish community monitoring results are shown in Table 3.8.1-2. These data compare Tellico to other run-of-the-river reservoirs. The station being nearer Chilhowee Dam prior to 1993 may have influenced results from the transition station, but overall results indicate that the Tellico fish community may be improving in recent years. In 1999 sampling, overall species diversity was good, as was the incidence of anomalies. Lower ratings were seen in overall abundance, percent of omnivore and insectivore species in the sample, and dominance of the sample by the most abundant species (TVA draft data).

Table 3.8.1-2 Fish Community Ratings, Vital Signs Monitoring Data

	Monitoring Years							
Station	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1997**	**1999**
Forebay	fair	fair	fair	fair	good	fair	good	good
Mid-reservoir	fair	poor	poor	good	good	fair	good	good

A total of 34 fish species was collected in TVA's most recent fish collections at Tellico in the fall of 1999. More abundant species in the overall sample were gizzard and threadfin shad, spotfin shiner, bluegill, largemouth bass, and brook silverside (TVA draft data).

TWRA creel data indicate that largemouth bass is the species caught in highest numbers, with desirable proportions of quality size fish in the catch. White crappie and bluegill were the second and third most abundant species taken by anglers. TWRA data also reveal that excellent survival to catchable size and relatively slow growth are characteristic of Tellico's largemouth bass population. Average fishing pressure in recent years has declined, probably due to stabilization in fish populations, which is typical after fertility decreases from the levels seen in a new reservoir (TWRA, 1998). The TDEC presently advises that catfish from Tellico Reservoir not be eaten because of PCB contamination.

3.8.2 Environmental Consequences

Impacts to aquatic resources are directly related to changes of the existing natural shoreline conditions. Aquatic resources can be impacted by changes to shoreline (riparian) vegetation, vegetation on backlying lands, and land uses. Shoreline vegetation, particularly trees, provides shade, organic matter (a food source for benthic macroinvertebrates), and shoreline stabilization; and trees provide aquatic habitat (cover) as they fall into the reservoir. Shoreline vegetation and vegetation on

backlying land provide a riparian zone which functions to filter pollutants from surface runoff while stabilizing erodible soils. Therefore, there would likely be some degradation of aquatic habitats associated with continued development along the reservoir shoreline under either alternative.

Shoreline development can alter the physical characteristics of adjacent fish and aquatic invertebrate habitats, which can result in dramatic changes in the quality of the fish community. One of the most detrimental effects of shoreline development is the removal of riparian zone vegetation, particularly trees. Removal of this vegetation can result in loss of fish cover and shade, which elevates surface water temperatures. Also, fish spawning habitat, such as gravel and woody cover, can be rendered unsuitable by excessive siltation and erosion, which can occur when riparian vegetation is cleared (TVA, 1998a). Additionally, shoreline development often results in the removal of existing aquatic habitat (i.e., stumps, brush, logs, boulders, etc.) in association with the construction of water use facilities.

Under some circumstances, construction of docks and piers, while having short-term negative impacts, can increase fish habitat. Fixed docks and piers, especially those with pilings driven into the substrate, provide shade and cover for fish and aquatic invertebrates (White, 1975). Fixed docks, when combined with habitat improvements such as anchored brush, rock aggregations, log cribs, and/or other forms of cover, can actually enhance the shoreline aquatic habitat.

Alternative A – Under this alternative, few tracts of TVA property are designated specifically for protection of sensitive resources, and the extent of protection of natural resources in other designations (such as "Cultural/Public Use/Open Space Areas") would be uncertain. Protection of the natural reservoir shoreline may be undertaken as a secondary consideration on tracts of TVA land designated for various uses including natural resource protection or conservation. Consequently, benefits to aquatic communities may not be a primary consideration when land use decisions are made affecting those tracts. Under this alternative, the quality of aquatic habitats (as evidenced by SAHI scores from SMI data analysis) associated with various land use allocations would likely remain similar to currently existing conditions, which rated "fair" (Table 3.8.2-1). Use of the TVA fee land below the 820-foot contour has been controlled by land rights or rights "implied" from the use of the backlying land. As a result, residential development on TRDA tracts, as well as on private land adjoining TVA shoreland, has resulted in a loss of riparian woody vegetation at some sites where trees on the shoreline have been cleared. In some cases, clearing of trees and brush may have accelerated shoreline erosion, resulting in the placement of seawalls or other shoreline stabilization. Impacts have been less on shorelines lacking woody vegetation (where habitat would have been poor prior to development); in fact, aquatic habitat can actually be improved by placement of riprap or construction of fixed docks on these sites.

Table 3.8.2-1. Allocation of Land in the 1982 Tellico Reservoir Land Use Plan, With Associated SAHI Score (Alternative A)

Land Use Category	Number of Acres	SAHI Score*	% of Total
TVA Dam Reservation	665.9	14	5.3%
Natural/Wildlife Areas	1,912.3	27	15.1%
Cultural/Public Use/Open Areas	7,679.9	24	60.7%
Industrial Development Areas	367.0	14	2.9%
Private Residential Areas	423.6	15	3.4%
Commercial Recreation Areas	41.7	14	.3%
Public Use Recreation Areas	484.9	15	3.8%
State Recreation Areas	901.8	15	7.1%
Eastern Band of the Cherokee Indians Memorial Site	109.6	15	.9%
Highway	56.1	14	.4%
	12,642.8	avg. 22	100.0%

** Good=27-35; fair=17-26; and poor=7-16*

Alternative B – This alternative would provide a better opportunity to protect or enhance aquatic habitats by identifying sensitive resource management or conservation as the identified use on some tracts now having general designations such as Cultural/Public Use/Open Space Areas. Any of the proposed uses of Zone 3 or 4 lands would allow for the protection or enhancement of aquatic habitats by preserving a natural shoreline condition offering a variety of cover types. The extent of woody shoreline cover on such lands as are included in Zones 3 and 4 would be expected to increase in the future as natural succession continues. In Alternative B, 27 parcels (2185 acres) representing 17.3 percent of total acreage, are in the Sensitive Resource Management Zone and 41 additional land parcels (7136 acres) representing 56.4 percent of total acreage are in the Natural Resource Conservation Zone.

Even consumptive activities such as timber harvesting (or other resource manipulation activities on Zone 4 lands) would not adversely impact aquatic resources if properly planned and conducted so that the riparian zone and associated littoral aquatic habitats are protected. The littoral zone is the most productive region of a reservoir. Most important fish species use littoral habitats because of their spawning requirements, the availability of submerged cover (i.e., rocks, logs, brush, etc.), aquatic invertebrates, and small fish as a food source.

Allocation of other parcels for future recreational activities would allow TVA control over developments to minimize adverse impacts. In Alternative B, 33 parcels representing 14 percent of total acreage are allocated to the Recreation Zone. In addition, developed recreation areas allow for the construction of facilities such as fishing piers, artificial fish attractors, or other fish habitat enhancements. Developments such as public parks, recreation areas, and water access sites would

allow access for bank fishing. Some areas may be suitable for the construction of facilities such as fishing piers and the placement of artificial fish attractors or other habitat enhancements.

The SAHI was used to determine any cumulative impacts of shifts in land allocation under Alternative B on the existing and future aquatic habitat quality of Tellico Reservoir. SAHI scores for Alternative A allocation categories that encompass the land use activities planned under Alternative B were utilized to represent changes in land use. Results indicate that reservoir-wide SAHI scores would be essentially unchanged under Alternative B, and still in the "fair" range (Table 3.8.2-2). It is possible that the quality of littoral aquatic habitats will improve in some areas through natural succession and with the protective measures mentioned above, as well as SMP standards for private water use facilities and vegetation management.

Table 3.8.2-2. Summary of Proposed Land Use Allocations With Associated SAHI Score (Alternative B)

Number of Parcels	Proposed Land Allocations	Acres	SAHI Score*
3	2 - Project Operations	635.1	14
27	3 - Sensitive Resource Management	2,184.5	27
41	4 - Natural Resource Conservation	7,136.5	24
8	5 - Industrial/Commercial Development	331.4	14
33	6 - Recreation	1,803.5	15
27	7 - Residential Access	551.8	15
		12,642.8	avg. 22

** Good=27-35; fair=17-26; and poor=7-16*

Four projects that have been conceptually proposed (Eastern Band of the Cherokee Indians Development, Greenway, Coytee Springs Recreation Area, and the Tellico River Corridor) would not significantly alter the quality of adjacent aquatic habitats. Although the Eastern Band of the Cherokee Indians Development is currently allocated Cultural/Public Use/Open areas, which generally exhibited higher SAHI scores, the change to developed recreation would not be as dramatic at this site because of the presence of a small public-use area there now. The Greenway could affect a large area of land and 16.0 miles of shoreline, but the facilities can be designed in such a way that impacts to shoreline vegetation and littoral habitats would be minimal. This would be in keeping with the stated objective to maintain as much of the natural surroundings as possible. Aquatic impacts resulting from this type of development would be less than those associated with recreation developments featuring sports fields, pavilions, and extensive cleared areas. The Coytee Springs Recreation Area would likely result in some degradation of shoreline vegetation associated with more intense public use (i.e., loss of understory brush, dead trees, etc.). However, these impacts could be minimized if the maintenance of

the existing shoreline condition and installation of structure such as brush in the drawdown zone is made an objective during project design. The Tellico River Corridor should better protect aquatic habitats and riparian vegetation by providing guidelines to minimize disturbance of this unique area during the construction of approved water use facilities.

Development of the reservoir shoreline is likely to continue under either alternative. However, Alternative B affords additional protection to aquatic resources near some Zone 7 lands by designating some adjacent shoreline as Zone 4 land, which will allow preservation of a more natural shoreline condition in some restricted areas of residential development. Narrow shoreline strips of TVA land fronting Zone 5 lands can also be maintained in a natural condition since industrial/commercial development seldom requires extensive clearing of shoreline vegetation. Standards implemented in accordance with SMP (TVA, 1998a) will provide improved protection for existing natural shoreline conditions and the unique standing timber aquatic habitat that exists in the Tellico River arm of the reservoir. Some negative impacts to the aquatic environment would occur under either alternative, but such impacts can be rendered insignificant with proper planning, use of protective and mitigative measures during development, and implementation of shoreline categorization. Because aquatic habitat on Tellico can be considered only "fair" overall, impacts to littoral aquatic habitats would be a major consideration in future decisions affecting TVA lands under either alternative. However, Alternative B would likely result in fewer impacts with parcels in Zones 3 and 4 dedicated to protection and conservation.

3.9 Socioeconomics

3.9.1 Affected Environment

The Tellico Reservoir lies in Blount, Loudon, and Monroe Counties in middle east Tennessee, largely within the western part of the Knoxville metropolitan statistical area and well within the Knoxville labor market area.

Population – The 1999 population of the three counties in the Tellico area is estimated by the U. S. Bureau of the Census to be 178,253, a 20.6 percent increase over the 1990 population of 147,758. This growth rate is faster than that of the state, which is estimated to have grown by 12.4 percent, and the nation, which is estimated to have grown by 9.6 percent. Tellico is near much of the fastest-growing parts of the metropolitan area, as growth spreads westward within the area. This is evidenced by the 27.6 percent estimated increase in the population of Loudon County, from 31,255 in 1990 to 39,892 in 1999. In addition, the fastest growing parts of Monroe County have been the west and northwest areas in the general vicinity of Tellico. This general growth pattern is expected to continue.

Recent population growth has exceeded long-term historical rates. TVA considers it likely that this pattern of faster growth may continue in the near future; the local population projections in Table 3.9.1-1 assume a continuation of this faster growth. The major population centers near the reservoir are Knoxville in Knox County and Oak Ridge in Anderson County. Smaller population centers are Maryville and Alcoa in Blount County, Lenoir City and Loudon in Loudon County, and Madisonville and Sweetwater in Monroe County.

Labor Force and Unemployment – In 1999, the civilian labor force of the three-county area was over 91,000, as shown in Table 3.9.1-2. Of those, about 3,500 were unemployed, for an unemployment rate of 3.9 percent. Loudon County had the lowest unemployment in the area at 3.0 percent, with Blount County somewhat higher at 3.7 percent. Monroe County had a higher unemployment rate of 5.3 percent. The unemployment rate for the area as a whole was lower than both the state and national rates.

Table 3.9.1-1 Population and Population Projections, 1980-2010

County	1980	1990	1999	2000	2010
Blount	77,770	85,962	102,785	107,000	128,000
Loudon	28,553	31,255	39,892	42,100	52,800
Monroe	28,700	30,541	35,576	36,800	43,100
Area Total	135,023	147,758	178,253	185,900	223,900
Tennessee	4,591,023	4,877,203	5,483,535	5,657,000	6,165,000
United States (000)	226,542	248,791	272,691	275,306	299,862
Percent Change In Population					
County	**1980-1990**	**1990-1999**	**1990-2000**	**2000-2010**	**1990-2010**
Blount	10.5	19.6	24.5	19.6	48.9
Loudon	9.5	27.6	34.7	25.4	68.9
Monroe	6.4	16.5	20.5	17.1	41.1
Area Total	9.4	20.6	25.8	20.4	51.5
Tennessee	6.2	12.4	16.0	9.0	26.4
United States	9.8	9.6	10.7	8.9	20.5

Source: Historical data from U.S. Bureau of the Census; projections for Tennessee and United States from U.S. Bureau of the Census (United States middle series and Tennessee Series A); county projections by TVA

Table 3.9.1-2 Labor Force Data, Residents of Tellico Area, 1999 Annual Average

County	Civilian Labor Force	Employment	Unemployment	Unemployment Rate
Blount	51,830	49,910	1,920	3.7
Loudon	20,720	20,100	620	3.0
Monroe	18,750	17,760	990	5.3
Area Total	91,300	87,770	3,530	3.9
Tennessee	2,818,800	2,705,300	113,500	4.0
United States	139,368,000	133,488,000	5,880,000	4.2

Source: Tennessee Department of Employment Security; U.S. Bureau of Labor Statistics.

Jobs – The number of jobs in the Tellico area has risen fairly steadily over the past several years. In 1997, the area's total employment, including both proprietors and wage and salary workers, was over 73,000, an increase of 24.9 percent since 1989. Over 58 percent of these jobs were in Blount County. Manufacturing industries accounted for 22.8 percent of the Tellico area's jobs, a slight increase from 22.4 percent in 1989. The number of manufacturing jobs increased during this period in both Blount and Monroe Counties, while declining in Loudon County. The service sector accounted for over 15,000 jobs and 20.5 percent of all employment in 1997, compared to 20.4 percent in 1989.

Occupation Patterns – All the counties in the Tellico area have a lower proportion of their workers in managerial and professional jobs than the state average; an average of 19.1 percent for the area, compared to 22.6 percent statewide. The area also has a lower share of workers in technical, sales, and administrative jobs; 27.8 percent compared to 30.1 percent statewide. Conversely, the area has a higher share of its workers in blue-collar jobs. The shares in Blount County are more similar to the statewide averages, while Monroe County and, to a lesser extent, Loudon County have proportionally fewer white-collar workers and more blue-collar workers.

Income – Per capita personal income in the area increased by 176 percent between 1979 and 1997, about the same as the 177 percent increase experienced by the nation but less than the 204 percent increase in the state. The per capita income of area residents in 1997 was $19,348, 85 percent of the level of the state of Tennessee and 77 percent of the U.S. average. Monroe County's per capita income of $16,187 was the lowest in the Tellico area.

The manufacturing sector currently generates 36.6 percent of the area's earnings by place of work, over twice the national average of 17.7, and well above the state average of 21.7 percent. The Tellico area share, however, is misleading. In Monroe County, 50.8 percent is from manufacturing compared to 34.2 and 30.7 percent, respectively, in Blount and Loudon Counties.

Housing – Based on 1990 median values of owner-occupied houses, housing prices are generally similar to those elsewhere in the state. Blount County had the highest-priced housing of the area counties at $60,200, while Monroe County had the lowest-priced at $40,200. In Loudon County, the median value was $50,800. The median value of housing in the state of Tennessee was $58,000 in 1990.

Lakefront lots on Tellico Reservoir, one-third to one-half acre in size, currently sell for between $100,000 and $350,000 (TVA, 1998a; B. Richards, Tellico Village, Personal Communication). The market continues to grow for lakefront and lake view real estate. TVA continues to receive pressure to make land available for private residential use.

Industrial Sites – Industrial and economic development activities related to Tellico Reservoir occur both adjacent to the reservoir and in communities nearby. The existing development activities are enhanced by good highways, rail facilities, the availability of services, and a land base for both waterfront and nonwaterfront facilities. All of the shoreline of Tellico Reservoir lies within the counties of Blount, Loudon, and Monroe.

There are 14 industrial parks in Blount, Loudon, and Monroe Counties which have tracts of land that are developed and available for industrial use, including two industrial parks adjacent to the reservoir itself. The Tellico West Industrial Properties and the Niles Ferry Industrial Park are located along Tellico Reservoir and have frontage along the water.

Some of the industries in the Tellico West Industrial Properties use the reservoir for testing boats. A barge terminal owned by the Tellico Reservoir Development Agency is located in the Niles Ferry Industrial Park. One industry in the Tellico West Industrial Properties has recently utilized the river for an incoming barge shipment and several other industries in the area have utilized barge transportation for specific movements. Industrial development along Tellico Reservoir has occurred in areas that were designated for Industrial Development in the Contract No. TV-60000A land plan.

TVA land along the Morganton Peninsula site on the right descending bank of the reservoir near Vonore is now committed for industrial use. An evaluation of future uses for the site has indicated that industrial use for the property is the best alternative at the present time. The highway improvements currently underway to make U.S. Highway 411 a four-lane highway will greatly improve access to the area and may increase the demand for industrial land.

There are several industrial and commercial developments associated with the reservoir, mostly manufacturing facilities and distribution or service centers. The largest industrial category is transportation equipment (including boat building and repair), which includes several firms that employ an estimated total of more than 1200 workers. Other important manufacturing industries include machinery, lumber and wood products, furniture and fixtures, and glass.

Environmental Justice – The nonwhite population in the area in 1990 was much lower than the state average of 17.0 percent. The highest share was in Blount County, 4.0 percent, with the other counties at 3.2 in Monroe and 1.7 in Loudon. Hispanic origin populations range from 0.3 to 0.4 percent, all below the state average of 0.7 percent.

In Blount County, the percentage of persons below poverty level in 1989 was 12.4, lower than the state average of 15.7. In Loudon County, the poverty rate was slightly higher at 13.6 percent, still below the state average. In Monroe County, the rate was higher than the state average at 17.8 percent.

3.9.2 Environmental Consequences

Socioeconomic impacts would arise from use of reservoir lands for industrial or commercial use and from the construction of water use facilities. Impacts may also arise if recreational or scenic values attract people from outside the area. Additional impacts may occur if residential development is attracted to areas on or near the reservoir.

As discussed in Section 3.9.1, the population projections for the Tellico area presented in that section assume a continuation of the relatively fast growth of the area over the past few years, including growth around Tellico Reservoir. The proposal for development by Tellico Landing LLC could be outside this framework. At the present time, not enough details of the development are available to allow analysis of its impacts. It is possible that this development might lead to greater population growth around the reservoir or to a higher level of impacts on employment and income associated with the reservoir than would be expected based on the trends of recent years. Additional commercial recreation opportunities probably would bring in more visitors from outside the area, providing a positive impact on local income. The impacts from this development would be essentially the same regardless of whether Alternative A or Alternative B is selected.

Alternative A – Under the No Action Alternative, the 1982 land use plan would continue to be used. This system currently classifies 371 acres of land for industrial use. Some of this land may not in fact be available for such use due to the presence of sensitive resources or due to use for enhancement of natural resources. In general, the land allocated for industrial use is waterfront strip, mostly narrow, adjoining non-TVA lands that are designated for industrial use. Some of the property is already in use for purposes such as the Tellico Area Services System (TASS) water treatment plant. Adjoining properties that are designated for industrial use would most likely be used for some type of industry whether or not the TVA strips were available. However, the availability of the TVA property for related uses (water access for industry) is likely to affect the industry mix on the adjoining properties by making those properties attractive to firms needing water for transportation purposes or for process use. This would increase the range of opportunities available to industrial developers in the area. The impact on jobs and income in the local economy is uncertain.

About 1425 acres of land are classified under the 1982 land use plan as being available for recreation. Most of this allows 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. Most activity of this type is by people who live in the area around the reservoir, although there is and will continue to be some outside usage. This outside usage has a positive impact on income and employment in the area. Lands classified as Commercial Recreation could be used for larger recreation developments, such as marinas, commercial boat docks, and campgrounds. While the availability of such facilities would attract some users from outside the area as well as increase the recreation opportunities for area residents, they are not likely to result in an important increase in jobs and income in the area.

There is potential for additional residential development along the reservoir. Some shoreline could be used for docks. Most of the people who would move to residences along TVA-owned shoreline are persons who would otherwise live somewhere in the general area. Thus the construction of homes adjacent to TVA-owned shoreline would not be an important impact on the local economy; however, the construction of additional water use facilities to accompany the residential construction might be important if a large number were constructed at one time. Use of residential units on a part-time basis (vacations, weekends, etc.) by persons whose full-time residence is elsewhere would have some, probably small, impact on the local economy.

Alternative B – Under Alternative B, specific allocations are made to allow for new recreation uses and for additional recreation development. This alternative is responsive to recreational needs in the area; as a result, more people would be attracted to the lake to take advantage of these opportunities. While it is likely that most of these users would be from the immediate or surrounding area, there would also be some increase in visitation by users who would require overnight (or longer) accommodations. While this increase would result in some positive impact on local income and employment, especially in places such as Lenoir City, it would not likely be an important addition to the overall economy of the area.

Eight parcels of land would be designated for industrial/commercial use. Some of these are narrow strips along the reservoir that would continue existing uses, such as TASS purposes or as visual and noise buffers for current uses. Other parcels could be used to support industry on backlying non-TVA lands by providing water access, support which might make possible a specific use of the backlying property that would not otherwise be feasible. However, in the absence of this support, the land would most likely be developed for other industrial or commercial uses that would not require such support. Therefore, the socioeconomic impacts would probably not be greatly different whether or not TVA provided water access.

Several parcels are designated for Residential Access. However, these are areas that either qualify for or are governed by outstanding ingress/egress rights. Granting of access would be in accord with SMP (TVA, 1998a).

As discussed in Section 2.4, Alternative B, allocating uncommitted TVA land decreases the emphasis on commercial, industrial, and residential uses and increases the emphasis on sensitive resource protection and natural resource conservation.

This change in emphasis might lead to less development on the shoreline. However, this change probably would not have an important impact on the local economy since much of this activity likely would occur nearby instead.

Environmental Justice – There would be no important difference among the alternatives with regard to impacts on minority and low-income populations. Under either alternative, there would continue to be large amounts of land available to everyone for informal recreation. Jobs resulting from development would be available to applicants based on qualifications, and there would be no direct adverse impacts that would disproportionately affect minorities or low-income residents.

3.10 Navigation

3.10.1 Affected Environment

The commercial navigation channel on Tellico Reservoir extends 18.8 miles up the Little Tennessee River from the Tellico Canal at Tennessee River Mile 602.3L to the public use barge terminal at Little Tennessee River Mile (LTRM) 18.8L. The commercial channel was prepared prior to impoundment of the reservoir to provide a year round, minimum 11-foot channel suitable for 9-foot draft towboats and barges. The U.S. Coast Guard maintains the navigation channel buoys and onshore daybeacons marking the commercial navigation channel. Safety landings were established at LTRMs 3.0L, 5.7R, 8.7R, and 13.7R to provide commercial tows places to tie off and wait during periods of severe weather, fog, or equipment malfunction. The public use terminal at LTRM 18.8L handles barge shipments on demand. Recently, the terminal has accommodated local industry in the transfer of machinery, steel, electrical equipment, and transformers. In addition, TVA occasionally moves large pieces of equipment through the terminal for transport to the Ocoee hydro plants. Minor commercial landings were identified at LTRM 23.9R and Tellico River Mile 4.1 as future sites for handling barge shipments.

TVA marks secondary navigation channels for recreational boaters. Secondary navigation channel markers consist of buoys and onshore day boards. Recreational channels are maintained on the Little Tennessee River between Miles 19.0 and 29.6; Tellico River from the mouth to Mile 7.7; Jackson Bend cutoff between LTRMs 10.2 and 12.2; and Clear, Fork, Bat, Baker, Ninemile, Fourmile, Notchy, and Ballplay Creeks.

3.10.2 Environmental Consequences

Alternative A – The current land plan defined under Contract TV-60000A with the TRDA identifies and designates shoreline for four safety landings on Tellico Reservoir. TVA prohibits the construction of water use facilities and shoreline alternations within the marked limits of safety landings. The only acceptable shoreline alteration within these limits would be the placement of riprap for control of erosion. Under this alternative, the safety landings would continue to be available for use by the towing industry, and there would be no impact on navigation. The minor commercial landing at LTRM 23.9R will be retained for handling future barge shipments.

Alternative B – Under Alternative B, the land use designation shown for the shoreline containing the four safety landing tracts would have little impact on navigation. The shoreline fronting the safety landing at LTRM 3.0L would be zoned for project operations which includes the safety landing designation. Shoreline fronting the safety landings at LTRMs 5.7R and 8.7R would be zoned for natural resource conservation. Use of the backlying land identified for natural resource conservation would be limited to hunting, camping, agriculture, and wildlife observation with little, if any, development along the shoreline. The safety landing at LTRM 13.7R is located on land transferred to TRDA and is planned for industrial development. To avoid interference with commercial navigation, the current practice of prohibiting the construction of water use facilities and shoreline alterations within the marked limits of the safety landing would be continued. In addition, water use facilities on shoreline immediately upstream and downstream of the safety landings would need to be restricted to ensure that barge tows would have sufficient room to maneuver in and out of the safety landing without the risk of damaging private property. The minor commercial landing at LTRM 23.9R will be retained for handling future barge shipments. The impacts of the use of the minor commercial landing would be only site specific and should not have a long-term impact on the reservoir. The use of the minor commercial landing would be beneficial by reducing truck traffic since the landing would be used for only movement of commodities such as rock or gravel from the immediately surrounding area.

3.11 Prime Farmland

3.11.1 Affected Environment

The conversion of farmland to industrial and other nonagricultural uses essentially precludes farming the land for the foreseeable future. With enough conversion of productive farmland, the economic base of rural communities can be adversely affected. Continued nationwide conversion of such land to nonagricultural uses has the potential of ultimately threatening the nation's agricultural capability--the ability to provide its citizens with basic requirements of food and fiber. Recognizing these long-term trends, the Federal Farmland Protection Policy Act (FFPPA) was signed into law in 1981. The regulations codified at 7 CFR Part 658 set forth the criteria developed by the Secretary of Agriculture for identifying effects of federal programs on the conversion of farmland to non-agricultural uses.

Of the several classes of farmland covered by the law (prime farmland, unique farmland, and farmland of statewide or local importance), prime farmland is the most important and is the primary type that is considered on the lands being evaluated in this EIS. Prime farmland is land that has the best combination of physical and chemical characteristics for the production of food, feed, forage, fiber, and oil seed crops. In addition, the land could be available for use as pasture, range land, forest land, and or other land, but not for urban or build-up areas. It has the soil quality, growing season, and moisture supply needed to produce sustained high yields of

crops when treated and managed according to acceptable farming methods. Prime farmland occurs on level to gently sloping land (usually less than 6 percent slope).

Description of Soils and Prime Farmland on Tellico Reservoir – There are 42 soil map units totaling 2102 acres located on the lands being planned that are considered to be prime farmland. Located in the Loudon and Monroe County portions of the reservoir, they represent 2.7 percent and 3.6 percent of each county's total prime farmland soils, respectively. Tellico Reservoir lands within Blount County do not contain prime farmland soils. The prime farmland soils are found on level to nearly level side slopes; along terraces; in depressions; narrow strips along drainage ways and streams; and on bottomland of creeks and rivers. They are listed in Appendix C-5, Table C-5.1.

The amount of prime farmland that could be impacted by land use allocations was determined by measuring acreage of the various soils within the prime farmland category. The soils database is available from the TVA Geographic Information Services, Norris, Tennessee, and from the published United States Department of Agriculture-Natural Resources Conservation Service (formerly Soil Conservation Service) Soil Survey Reports of Blount County (1959), Loudon County (1961), and Monroe County (1981).

3.11.2 Environmental Consequences

Alternative A - As shown in Table 3.11.1-1, 10.7 percent (226 acres) of the total prime farmland soils are unavailable for agricultural use under Alternative A (those classified as Commercial, Highway, Industrial, Recreational and Residential under the current plan). This alternative would result in no change to the presently minor amount of prime farmland unavailable within the three counties or to trends in farmland conversion occurring in the area. As proposals for future development are submitted to the agency over time, continued management of TVA lands under the present contract would require the assessment of impacts to prime farmland, where they occur, on a case-by-case basis.

Alternative B - As shown in Table 3.11.1-2, 15.4 percent (324 acres in Zones 5, 6, and 7) of the total prime farmland soils would be unavailable for agricultural use. As compared to Alternative A, this alternative could result in a slight, insignificant decrease in the amount of prime farmland available in the three-county area. However, of the 15.4 percent, the 6.3 percent designed for recreation could be converted to agricultural use as long as there are no permanent modifications to the land or structures built that could not be easily changed or removed. Cumulative impacts to prime farmland soils would be minimal and insignificant under the proposals for both the greenway and the Eastern Band Cherokee development near Highway 411 due to the very small acreage of prime farmland soils within each area. Permissible private water use facilities developed within the River Corridor would not affect the suitability of those parcels as prime farmland.

Table 3.11.1-1 Percent of Prime Farmland in Contract No. TV-60000A Land Use Plan - Alternative A

Land Use Designation	Acres	Percentage
Commercial Recreation Areas*	2.8	0.1%
Cultural/Public Use/Open Space Areas	1260.0	60.0%
TVA Dam Reservation	251.9	12.0%
Eastern Band of the Cherokee Indians Memorial Site	21.0	1.0%
Highway*	5.5	0.3%
Industrial Development Areas*	77.7	3.7%
Natural/Wildlife Areas	343.5	16.3%
Public Use Recreation Areas*	41.3	2.0%
Private Residential Areas*	72.0	3.4%
State Recreation Areas*	26.4	1.2%
TOTAL	2102.1	100.0%

**sum of noted designations totals 226 acres (10.7 %)*

Table 3.11.1-2 Percent of Prime Farmland Allocated - Alternative B

Proposed Land Allocations	Acres	Percentage
Zone 2 - TVA Project Operations	251.8	12.0%
Zone 3 - Sensitive Resource Management	476.8	22.6%
Zone 4 - Natural Resource Conservation	1,049.5	50.0%
Zone 5 - Industrial/Commercial Development	77.7	3.7%
Zone 6 - Recreation	132.5	6.3%
Zone 7 - Residential Access	113.8	5.4%
TOTAL	2,102.1	100.0%

3.12 Other Issues

3.12.1 Floodplains

The 100-year floodplain on Tellico Reservoir is the area inundated by the 100-year flood. The 100-year flood elevation for the Little Tennessee River varies from elevation 816.2-feet above mean sea level (msl) at Tellico Dam (LTRM 0.35) to elevation 823.0-feet msl at the upper end of Tellico Reservoir at LTRM 33.57 (downstream of Chilhowee Dam). For the Tellico River, the 100-year flood varies from elevation 816.5-feet msl at the mouth to elevation 838.5-feet msl at the upper end of Tellico Reservoir at Tellico River Mile 20.67. Tabulations of the 100-year

flood elevations are included in Appendix C-6. The planned land lakeward boundary is maximum pool elevation of 813.0-feet msl.

For either alternative, any development proposed in the 100-year floodplain would be subject to the requirements of Executive Order 11988 (Floodplain Management). The first step would be to determine if the activity is covered under TVA's "Class Review of Certain Repetitive Actions in the 100-Year Floodplain." A class review was conducted by TVA for the following repetitive actions:

- Private and public water use facilities
- Commercial recreation boat docks and water use facilities
- Picnic tables, benches, grills and fences on TVA lands
- Underground, overhead, or anchored utility and related lines and support structures
- Water intake structures
- Outfalls
- Mooring and loading facilities for barge terminals
- Agricultural use of TVA land
- Minor grading and fills
- Bridges and culverts for pedestrian, highway, and railroad crossings
- Small, private, land-based storage sheds and buildings having less than 25 square feet of floor space and used for storage of water use related equipment

As a result of this review, TVA has determined that there are no practicable alternatives to these repetitive actions that would avoid siting in the floodplain. A set of review criteria was also established to ensure that natural and beneficial floodplain values are not significantly affected. If these criteria are followed, adverse floodplain impacts should be minimized. Several activities undertaken in implementing TVA's proposed action under Alternative B allocation of lands on the Tellico Reservoir would qualify as repetitive actions

If an activity is not a repetitive action in the 100-year floodplain, Executive Order 11988 requires the applicant and the initiating TVA organization to evaluate alternatives to the floodplain siting which would either identify a better option or support and document a determination of "no practicable alternative" to siting within the 100-year floodplain. If a determination of no practicable alternative is made, adverse floodplain impacts must still be minimized. Such case-by-case determinations of "no practicable alternative" would be made at the time of reviewing Section 26a applications for non-repetitive actions proposed on the Tellico Reservoir.

Any fill material placed between elevations 807.0-feet msl and 813.0-feet msl would be subject to a charge for lost power storage. Generally, the quantity of fill required for residential projects such as shoreline stabilization and boat ramps would not result in a charge for lost power storage. Any material placed between elevations 807.0-feet msl and the TVA Flood Risk Profile (FRP) elevation would be subject to

the requirements of the TVA Flood Control Storage Loss Guideline (TVA, 1999). All development subject to flood damage must be located above the FRP elevation. The FRP is used to control flood damageable development for TVA projects and on TVA Lands.

The FRP elevation varies from elevation 817.0-feet msl at Tellico Dam (Little Tennessee River Mile 0.35) to elevation 826.6-feet msl at the upper end of Tellico Reservoir at Little Tennessee River Mile 33.57. For the Tellico River, the FRP varies from elevation 817.7-feet msl at the mouth to elevation 841.6-feet msl at the upper end of Tellico Reservoir at Tellico River Mile 20.67. For Tellico Reservoir, the FRP elevations are equal to the 500-year flood elevations. Tabulations of the FRP elevations are also included in Appendix C-6.

Under Alternative A, the allocation, development, and/or management of properties would be made on a case-by-case basis, and evaluations would be done individually to ensure compliance with Executive Order 11988. Potential development would generally consist of water use facilities and other repetitive actions in the floodplain that should result in minor floodplain impacts. Under Alternative B, the potential adverse impacts to natural and beneficial floodplain values would be less than those under Alternative A, because a substantial portion of the available land would be allocated for resource management and conservation activities. Little development which could affect floodplain values would occur on these Zone 3 and Zone 4 lands. Under either alternative, impacts to floodplain values would be insignificant.

3.12.2 Noise

Under Alternative A, it is unlikely that activities on lands that are allocated to Dam Reservation, Cultural/Public Use/Open Space Areas, Natural/Wildlife Areas, or retained lands would exceed community noise standards. Similarly, under Alternative B, it is unlikely that activities on lands allocated to Sensitive Resource Management, Natural Resource Conservation, Recreation, or Residential Access would exceed community noise standards. Potential noise sources, particularly on Industrial/Commercial lands, would include trucks and construction equipment. Any trucks entering industrial facilities would be required to meet EPA interstate motor carrier noise emission standards. Noise from trucks would be further reduced due to speed limits on industrial sites and access roads. Under Alternatives A or B, TVA would review each specific development plan to ensure the impact from construction and major noise emitting facilities is mitigated to acceptable levels as defined by federal regulations.

TVA typically applies the following guidelines in covenants pertaining to Industrial/Commercial Development areas. Under Alternatives A or B, activities would be expected to meet an operational (7 a.m. to 7 p.m.) noise limit of 60 decibels, A-weighted (dBA) equivalent sound level (Leq) 100 feet off the waterfront or at the property line. A nonoperational (7 p.m. to 7 a.m.) noise limit of 55 dBA Leq would be expected to be met. All fixed and mobile equipment would be

expected to be well-maintained and have factory equivalent mufflers installed and operational.

3.12.3 Air Quality

National Ambient Air Quality Standards (NAAQS) limit concentrations in the outside air of six pollutants: particulate matter, sulfur dioxide, carbon monoxide, ozone, nitrogen dioxide, and lead. These standards are designed to protect public health and welfare. An area where any air quality standard is violated is designated as a nonattainment area for that pollutant, and emissions of that pollutant from new or expanding sources are carefully controlled. In July 1997, EPA promulgated new, more restrictive standards for ozone and particulate matter; however, the standards have been challenged in court and it may take a long time to determine whether standards will withstand the judicial challenge.

In addition, Prevention of Significant Deterioration (PSD) regulations protect national parks and wilderness areas which are designated PSD Class I air quality areas. A new or expanding major air pollutant source within 31 miles of a Class I area would be required to estimate potential impact on the air quality of that Class I area. In addition, the federal land manager having jurisdiction over the Class I area may request similar action for large sources at distances of 31 to 62 miles.

There are three PSD Class I areas within 62 miles of Tellico Reservoir. The Great Smoky Mountains National Park is only 3 miles southeast of Tellico Reservoir, the Joyce Kilmer/Slickrock Wilderness Area is only 6 miles southeast of the reservoir, and the Cohutta Wilderness Area is approximately 41 miles southwest of Tellico Reservoir.

Any new industrial or commercial development would be expected to meet Clean Air Act standards in effect at the time. Any facilities on TVA land or facilities in the surrounding area may also require an air quality permit from the state of Tennessee. This would evaluate the magnitude of air emissions from the proposed source and from existing nearby sources, meteorological factors that affect dispersion of the pollutants, and the proximity to areas with special air quality requirements, such as nonattainment areas and PSD Class I areas.

The Plan is designed to minimize additional residential and commercial development on TVA lands, thus minimizing direct, indirect, and cumulative air emission impacts resulting from any TVA allocation decisions. Pollution from fossil-fuel combustion in construction equipment, fugitive dust emissions from operation of this equipment during dry conditions, and increased traffic during construction would cause some minor and temporary air quality degradation in the vicinity of the reservoir. However, state air pollution rules require construction projects to use reasonable precautions to prevent fugitive dust emissions. After construction is completed, normal residential activities, such as wood stoves, fireplaces, and gas-powered lawnmowers, would contribute somewhat to deterioration in local air quality, though it is not expected to have any impact on regional air quality.

Both alternatives would have an insignificant effect on air quality. Under Alternative A, the 1982 Tellico Land Use Plan would remain in place and any proposed industrial/commercial facilities, or residential development would continue to be evaluated on a case-by-case basis. No facilities are anticipated that would be inconsistent with air quality standards and, therefore, none would significantly affect local or regional air quality. Under Alternative B, proposed industrial or commercial facilities on land allocated to the Industrial/Commercial Zone would be evaluated on a case-by-case basis but would be limited to established areas (Zone 5). Likewise, proposals for residential development would be evaluated on a case-by-case basis.

3.13 Unavoidable Adverse Effects

Unavoidable adverse effects of each alternative are summarized in Section 2.4. Alternative A would likely result in an increase in residential, recreational, and commercial development. Commitment of the Tellico Project lands and shoreline for Residential Access and Commercial Recreation is possible in both alternatives. Under Alternative B, unavoidable adverse effects from development would be less. TVA's SMI EIS determined the unavoidable adverse effects associated with residential development (TVA, 1998a).

Additional development of Tellico Project lands would result in losses in forest area, local impacts to forest wildlife habitat required by forest species, and increase in suitable habitat for cowbirds, which would, in turn, impact the nesting success of birds. Shoreline development could also result in a loss of potentially suitable, but presently unoccupied, habitat for shoreline-using endangered and threatened species. Wetlands' functions and values could also be impacted by some shoreline development. There would be some degradation of aquatic habitat as more shoreline is open for residential development. Residential development could also lead to nutrient enrichment in the reservoir and fecal coliform contamination in some embayments.

From a recreation standpoint, residential shoreline development would essentially privatize public lands in front of lakefront houses, even though a strip of land adjacent to the shoreline may be public. This unavoidably displaces informal recreation users. Impacts associated with recreation are similar to residential effects, such as campgrounds impacting wildlife habitat by removing understory vegetation.

3.14 Relationship of Short-term and Long-term Productivity

Commitment of the shoreline to residential access, commercial, industrial, and some types of recreational development is essentially a long-term decision that would decrease the productivity of land for agricultural, forest, wildlife, and natural area management. Long-term productivity decreases would likely be greatest under Alternative A. As described in earlier sections, the types of changes that occur with residential development would result in a decline in the habitat quality for some terrestrial species and increase in habitat for others. Many of the water-related

impacts of shoreline development could be minimized by the use of appropriate controls on erosion, added nutrients, and pesticide input.

Increased development could occur under both alternatives and result in population increases along the shoreline. There is a potential for small long-term socioeconomic productivity benefits from new jobs and income that would be generated by the spending activities of these new residents. This would be the case as long as the desirable features that prompted their move to the shoreline were maintained or enhanced.

3.15 Irreversible and Irretrievable Commitments of Resources

Irretrievable use of nonrenewable resources (i.e., fuel, energy, and some constructions materials) could occur under Alternatives A and B due to residential shoreline development, as well as commercial, industrial, and some types of recreational development. The residential development would result in a region-wide population increase. This means that the same development could occur somewhere else in the region. Therefore, most (if not all) of these resources could occur somewhere in the region to provide the same residential development services, regardless of the alternative chosen.

As shoreline is converted to residential, commercial, industrial, and some types of recreational use, the land is essentially permanently changed and not available for agricultural, forestry, wildlife habitat, natural area, and some recreation uses in the foreseeable future. This is an irreversible commitment of land which would occur under both alternatives; over the long term it would likely be greater in magnitude under Alternative A.

3.16 Proposed Mitigation Measures

1. TVA will follow the procedures specified in a Memorandum of Agreement with the State Historic Preservation Officer for the identification, evaluation, and treatment of historic properties that are eligible for inclusion in the National Register of Historic Places.
2. USFWS guidelines would be used to establish buffer zones around nesting bald eagle nests.
3. The current practice of prohibiting the construction of water use facilities and shoreline alterations within the marked limits of the safety landing would be continued to avoid interference with commercial navigation.
4. Noise covenants consistent with the guidelines described in Section 3.12.2. would be included in land transfer instruments pertaining to parcels in Zone 5.
5. Amenities provided in Coytee Springs Recreation Area (Parcel 10) (e.g. picnic areas, walking trails, and greenway entry/exit points) would be limited to day-time use.
6. Guidelines proposed in Appendix B-1 would be consulted in reviewing applications for water use facilities on the River Corridor.

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Mr. Maurice E. Smith
Jackie Smith
Mr. Cecil W. Smith
Mr. Ronald E. Soard
Ms. Charlotte Soltman
Mr. Rene' Sonnenfeldt, Tellico Village Property Owners Association
James H. and Sheila Sonntag
Ms. M. Allison Sousa, Loudon County Chamber of Commerce
Donald J. and Jeanne Spaeth
Mr. Arthur Spurrier, Tellico Area Services System
Mr. Larry B. Stargel
Mr. Charles H. Sterling, Sterling Engineering, Inc.
Don L. and Carol Stieghan
Ron and Eva Stob
Larry and Angie Struttmann
Mr. Glenn Swafford
Dale and Flossie Tallent
Honorable Fred J. Tallent
Tellico Village Yacht Club
Mr. Frank H. Thomas
T. R. and Patricia Thomas
Mr. Charles D. Thompson
Mr. Paul W. Thompson
Mr. Preston B. Thompson
Mr. W. D. Thompson
Ms. Jo Ann Thompson Ed.D
Mr. Bob Thornton
Ms. Gale Thrower, Poarch Band of Creek Indians
Mr. & Mrs. Melvin Thurman
Ottice and Mary L. Tidwell
Ms. Rebecca Lee Tolbert
Wayne and Virginia Tolbert
Mr. John T. Tuck
Ms. Janice Tucker
Mr. Norb Twillman, Fox Road Boat Dock
Keith and Karen Urban
Mr. C. R. Vanosdale
Mrs. Beverly R. Veal
Mr. Jimmy D. Vineyard
Ms. Nikki S. Vineyard
Dr. Mary E. Wahl
William R. and Marjorie K. Waldrop
Mr. James W. Walker
Ms. Pam Walker
Don and Marlene Wanamaker
Mr. Jason W. Ward
Mrs. Estelle Bussell Ward
Mr. Gerald B. Wenzel
Dr. & Mrs. Keith C. and Jenny S. White
Mr. J. David Whitehead
Mr. James L. Wilbanks Jr, Tennessee Valley Sportsmans Club
Mr. J. Worth Wilkerson, Village Connection
Keith and Lisa Williams
Mr. B. J. Williams
Mr. Al Wilson, Cooper Homes
Ms. Sharon D. Wilson
Mr. Curtis Wolfe
Joseph T. and Babe Woznitski
Wayne and Carol Yarian
Mr. Robert J. Yingling Sr.
Gerald H. and Joan K. Zaar
Mr. Victor F. Zaidel
Mr. Charles Zimmerman
Ms. Cynthia Zurhellen

4.3 Glossary of Terms

100-year floodplain - the area inundated by the 1 percent annual chance (or 100-year) flood.

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.

benthic - refers to the bottom of a stream, river, or reservoir.

best management practices (BMPs)- a practice, or combination of practices, that has been determined, after problem assessment and examination of alternatives, to be the most effective, practical means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality.

Contract No. TV-60000A - an agreement between the TVA and Tellico Reservoir Development Agency to provide comprehensive Industrial, Residential, Commercial, Recreational, and Public Use Recreational development activities. A land use plan and development standards were incorporated into the agreement. The agreement was signed on August 25, 1982.

cultural resources - any historic structure, historic site, or archaeological site that is protected by the National Historic Preservation Act (NHPA) or other preservation legislation. The broad mission of TVA Cultural Resources includes evaluating, protecting, and preserving significant cultural, archaeological, and historic sites and structures, and maintaining a record of the history of TVA.

cumulative impacts - impacts which 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).

dayboard/daybeacon - structures placed on the shoreline to facilitate navigation.

dam reservation - lands generally maintained in a park-like 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 recreational opportunities such as public boat access, bank fishing, picnicking, etc.

direct impacts - effects which are caused by the action and occur at the same time and place (40CFR 1508.4).

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 - lowering the water level in a reservoir to make room for winter and spring precipitation that often fall in higher elevations. The reservoir serves as an emergency storage system to prevent flooding downstream.

dredging - the removal of material from an underwater location, primarily for deepening harbors and waterways.

embayment - a bay or arm of a reservoir.

emergent wetland - wetlands dominated by erect, rooted herbaceous plants such as cattail and bulrush.

Executive Order (EO) - a governmental order issued by the President with force of law.

extirpated - pulled up by the roots; destroyed; exterminated.

fecal coliform - common intestinal bacteria in human and animal waste.

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, and (2) the authority to control structures, under Section 26a of the TVA Act.

fragmentation - the process of breaking up a large area of relatively uniform habitat into one or more smaller, disconnected areas.

Greenway - a linear park located along natural features such as lakes or ridges, along man-made features including abandoned railways or utility rights-of-way, which link people and resources together.

The purpose of a Greenway is to create recreational opportunities for the public to enjoy a variety of passive recreational pursuits. Interest in Greenway development grew in earnest out of recommendations in the 1986 Tennesseans Outdoors and the 1986 President's Commission on Americans Outdoors reports which highlighted means to link our communities together and preserve recreation opportunities for future generations.

Greenways are now recognized for their aesthetic value, the preservation of valuable open space for plants and wildlife, and the vast array of recreation opportunities afforded future generations. This is all part of the Statewide Greenway Project announced by Governor Don Sundquist in May of 1996 and is defined as "multiple use corridor that respects the inherent qualities of natural systems and accommodates human-made systems in a way that is compatible with nature." Greenways generally require some infrastructure such as trails, parking lots, and restrooms, and the primary focus is on recreation.

Habitat protection area - These are designed to protect populations of plant and animal species that have been identified or proposed as endangered or threatened by the U.S. Fish and Wildlife Service or as endangered, threatened, or rare and unusual by one or more of the seven Tennessee Valley states.

Hydrologic Unit Code (HUC) - watersheds across the United States are delineated by the U.S. Geological Survey using a nationwide system based on surface hydrologic features. This system divides the country into 21 regions (2-digit), 222 subregions (4-digit), 352 accounting units (6-digit), and 2,262 cataloguing units (8-digit). A hierarchical HUC consisting of 2 digits for each level in the hydrologic system is used to identify any hydrologic area.

indirect impacts - effects which are caused by the action and are later in time or farther removed in distance but are still reasonably foreseeable (40 CFR 1508.4).

ingress/egress rights - outstanding rights of ingress to (right to enter) and egress from (right to exit) the reservoir pursuant to a deed or other similar document. In accordance to Contract No. TV-60000A (Attachment C) and in particular to the Tellico Reservoir, this in one of the conditions that must be met before a request for a privately-owned, water use facility can be considered for approval.

During the formative years of the Tellico Project, some of the lands purchased by TVA were subject to rights of ingress/egress, which gave adjoining land owners certain access rights across a portion or all of TVA property from their remaining property. The primary purpose for such rights was for the continuation of the watering of livestock in the creek, stream, or river which had been the custom of the former property owner. However, through the years the presence of livestock and the need to water them have diminished and been replaced by the desire for water use facilities such as docks, mooring posts, shoreline stabilization, etc. This helps explain the reason some areas having such deeded rights are more conducive to the watering of livestock than for the use and authorization of water use facilities. Many of the areas with ingress/egress rights are separated from the main reservoir by the new highways created/adjusted for the Tellico Project. Some are in very isolated areas that are now covered with functional wetlands or support identified sensitive resources.

macroinvertebrates - aquatic insects, snails, and mussels whose species, genus, etc., can be determined with the naked eye.

mainstream reservoirs - impoundments created by dams constructed across the Tennessee River.

marginal strip - the narrow strip of land owned by TVA between the water's edge and the adjoining private property, on which the property owner may construct private water use facilities upon approval of plans by TVA.

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 property and adjoining private property.

NEPA (National Environmental Policy Act) - Legislation signed into law in 1970 which, among other provisions, requires U.S. government agencies to prepare environmental reviews on proposed policies, procedures, plans, approvals, and other proposed federal actions.

neotropical migrant birds - birds which nest in the United States or Canada and migrate to spend the winter in Mexico, central America, the Caribbean, or South America.

physiographic provinces - general divisions of land with each area having characteristic combinations of soil materials and topography.

plan tract - a numbered parcel of TVA fee-owned land which, prior to the plan, has had no long-term commitments affecting future land uses as assigned through the reservoir land planning process.

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.

Public Law 87-852 - This act approved on October 23, 1962, authorizes the heads of executive agencies of the United States, including wholly-owned corporations, to grant easements over real property of the United States under their control for rights-of-way or other purposes. Term or permanent easements may be granted to state and local governments or private corporations or individuals. They may be made without monetary or other consideration, including the acquisition of an interest in other real property. TVA's General Counsel has determined the provisions of this act are fully available to TVA and its use has been adopted for a variety of purposes other than rights-of-way, such as recreation or industrial easements. The grantor has considerable flexibility in establishing terms and conditions under this type easement, and TVA has used the Public Law 87-852 authority extensively since its enactment.

recreation easement - this is one of the three conditions (see **residential access**) that must be met prior to the approval of private water use facilities along the Tellico Reservoir. In order to qualify, the adjoining property must lie within 100 feet of the 820-foot contour and abut those areas designated for Cultural/Public Use/Open Space Areas, Public Use Recreation Areas, and Private Residential Areas. This policy is unique to the Tellico Project. Under Alternative A, this procedure will remain unchanged. Under Alternative B, areas that qualify will be refined to the point that excludes areas that require crossing county/state highways, are locked from the main reservoir by relocated highways, or are in areas that have identified sensitive resources.

residential access - request for privately-owned, water use facilities will be considered if it meets one of the following conditions: (1) the adjoining private

property lies within 100 feet of the 820-msl contour and abuts those areas designated for Cultural/Public Use/Open Space Areas, Public Use Recreation Areas, and Private Residential Areas; (2) the adjoining private property has outstanding rights of ingress to and egress from the reservoir pursuant to a deed or other similar document regardless of the distance from the 820-msl contour; or (3) the adjoining property was transferred by TVA to the Tellico Reservoir Development Agency pursuant to Contract No. TV 60000A and the proposed request meets the requirements established in Attachment B.

Prior to the development of the Tellico Reservoir Land Management Plan, the above statement from Attachment C of Contract No. TV-60000A regulated the landrights and locations of water use facilities. During the planning process, efforts were made to clearly define the location for these described areas to eliminate some of the confusion concerning the tolerance/placement of a private water use facility. The maps generated by this plan combined current mapping technology with the residential access statement from Contract TV-60000A to create a clearly defined location of the areas where private water use facilities can be considered for approval. This same process identified potential residential areas that cross high-traffic highways or areas that are locked from the mainstreams by the presence of relocated highways. Areas defined as such are no longer included in the residential access statement.

In the early years of the Tellico Project, several private water use facilities were approved in areas that did not comply with the residential access statement. This is largely due to minor discrepancies of the initial maps and/or lack of a clear understanding of this innovative procedure of approving private access to the waters of Tellico Reservoir. No other TVA reservoirs employed such methods for residential access. As a result, there were several areas that developed residentially in locations that could not be allowed as defined by the above access statement. In this plan, we recognized some of these areas and designated the remainder of the developments as residential.

As in every request for private water use facilities, the approval is subject to investigation or mitigation of adverse impacts to natural or cultural resources.

resource management - A process or system of decision-making whereby resource use, conservation or environmental policies and practices are devised and implemented. Resource management can involve the development or conservation of resources over different spatial scales, ranging from a single product or service (e.g. a forest or fishery) to the global ecosphere.

riparian zone - an area of land that has vegetation or physical characteristics reflective of permanent water influence. Typically a streamside zone or shoreline edge.

riprap - stones placed along the shoreline for bank stabilization and other purposes.

river corridor - linear greenspace along both streambanks of selected tributaries entering a reservoir managed for light boat access at specific sites, riverside trails, and interpretive activities.

The purpose of a river corridor is to afford opportunities for the recreating public to enjoy natural settings in a riverine environment. Portions of the Tellico River have these characteristics and are worth preserving for future generations. The upper Tellico River is predominantly undeveloped, with some exceptions where subdivisions have sprouted or adjoining private land owners have developed private water use facilities. A portion of the Tellico River offers free-flowing water which transitions to a lake environment and flat water. Much of the river is not navigable for large boats, due to inadequate year-round water depth or underwater obstructions.

riverine - having characteristics similar to a river.

safety landing - A "safety landing" or "safety harbor" is a place where commercial traffic can moor temporarily during inclement weather, mechanical difficulties, or other operational emergency situation that requires a temporary stoppage along the river. As in all safety landings along the commercial navigation channel on the Tellico Reservoir, construction of water use facilities and shoreline alterations within the marked limits is prohibited. The only acceptable improvement would be the stabilization of the shoreline for the control of erosion.

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 within TVA 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 summer operating range which is 812-813 elevation for Tellico Reservoir.

significant cultural resources - Some of the tract descriptions state that “the tract contains significant cultural resources” or that “cultural resource considerations may affect development of the tract.” However, many of the parcel descriptions contain no reference to archaeological or other cultural resources. The lack of such references within a tract description does not necessarily indicate that significant cultural resources do not exist. The use of any tract for developmental purposes may require additional archaeological testing or mitigation of adverse impact to archaeological sites.

sensitive resources - As defined by TVA, include resources protected by federal law or executive order and other land features/natural resources TVA considers important to the area viewscape or natural environment.

Shoreline Aquatic Habitat Index (SAHI) - the index used to determine quality of shoreline aquatic habitat, based on seven characteristics important to support good populations of sport and commercial fish.

Shoreline Management Initiative (SMI) - an assessment of residential shoreline development impacts in the Tennessee Valley. TVA completed an EIS on residential shoreline development impacts throughout the Tennessee Valley.

stratification - the seasonal layering of water within a reservoir due to differences in temperature or chemical characteristics of the layers.

structure profile - A contour established by TVA along the Tennessee River and tributary reservoirs which marks the elevation above which structures are permitted on all lands which TVA either owns or on which TVA has certain landrights. Buildings for human habitation or any other form of development subject to significant damage are not permitted below this elevation. The profile is developed to avoid increasing the flood damage potential in areas affected by reservoir operations.

substrates - the base or material to which a plant is attached and from which it receives nutrients.

summer operating range - the level to which reservoirs are filled during the summer; for Tellico Reservoir, the summer operating range is 812-813 elevation. Where storage space is available above this level, additional filling may be made as needed for flood control.

Tellico Reservoir Development Agency (TRDA) - a public corporation created by the Tennessee Legislature in April 1982 (Chapter 679, codified as Section 64-1-70 et seq., Tennessee Code Annotated). This legislation provided "*The agency is created for the purpose of developing and effectuating plans and programs for the comprehensive development of, including acquisition, operating, managing, selling, and leasing and development of, all or a portion of the lands lying within the Tennessee Valley Authority Tellico Reservoir project…*"

Under the act creating TRDA, it is governed by a full-time director and a nine-person board of directors comprised of three county executives from Loudon, Blount, and Monroe Counties and two additional members from each county approved by the county commissions.

Tennessee Department of Environment and Conservation (TDEC) - the state agency dedicated to protecting the quality of Tennessee's air, land and water and preserving, conserving, enhancing and promoting the state's natural and cultural resources.

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 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."

4.4 Acronyms

APE – Area of Potential Effect

ARPA – Archaeological Resources Protection Act

BMPs – Best Management Practices

cfs – cubic feet per second

CFR – Code of Federal Regulations

CWR – Choto Waterfowl Refuge

DU – Ducks Unlimited, Inc.

EA – environmental assessment

EIS – environmental impact statement

EO – Executive Order

FFPA – Federal Farmland Protection Act

IBI – Index of Biotic Integrity

LTRM – Little Tennessee River Mile

MOA – Memorandum of Agreement

msc – maximum shoreline contour

msl – mean sea level

NAAQS – National Ambient Air Quality Standard

NEPA – National Environmental Policy Act

NHPA – National Historic Preservation Act

NMGT – In need of management

NRHP – National Register of Historic Places

PCBs – polychlorinated biphenyls

PSD – Prevention of Significant Deterioration

QU – Quail Unlimited, Inc.

RFAI – Reservoir Fish Assemblage Index

SAHI – Shoreline Aquatic Habitat Index

SMP – Shoreline Management Policy

SMI – Shoreline Management Initiative

TASS – Tellico Area Services System

TDEC – Tennessee Department of Environment and Conservation

TLWMA – Tellico Lake Wildlife Management Area

TMDL – Total Maximum Daily Load

TRDA – Tellico Reservoir Development Agency

TVA – Tennessee Valley Authority

TWRA – Tennessee Wildlife Resources Agency

USACE – U.S. Army Corps of Engineers

USDA – U.S. Department of Agriculture

USEPA – U.S. Environmental Protection Agency

USFS – U.S. Forest Service

USFWS – U.S. Fish and Wildlife Service

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APPENDIX A-1. SCOPING RESULTS

Tellico Reservoir Land Management Plan
Environmental Impact Statement (EIS)

Scoping Report

Prepared by

Tennessee Valley Authority

July 1999

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Introduction

Background

TVA is preparing an Environmental Impact Statement (EIS) on alternatives for management of certain TVA-managed lands surrounding Tellico Reservoir in Loudon, Monroe, and Blount Counties, Tennessee. The plan will help guide TVA resource management and stewardship decisions on 12,643 acres of TVA fee-owned public land on Tellico Reservoir.

TVA develops reservoir land plans to help in the management of reservoir properties in its custody. These plans seek to integrate land and water benefits, provide for public benefits, and balance competing and, sometimes, conflicting resource uses. The *Final Tellico Land Use Plan EIS* will utilize information and data from the *Tellico Reservoir Land Management Plan Environmental Assessment* (EA) (September 1997) and the *Shoreline Management Initiative: An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley* (November 1998).

TVA proposes to develop a reservoir land plan to guide land use approvals, private water use facility permitting, and resource management decisions on Tellico Reservoir. The plan would identify land use zones in broad categories. It is anticipated that lands currently committed to a specific use would be allocated to that current use unless there are overriding pressures for change. Such commitments include transfers, leases, licenses, contracts, power lines, outstanding land rights, or TVA-developed recreation areas.

Public Comment Opportunities

TVA is seeking public input to facilitate public involvement and to identify the range of issues and needs that should be considered in the Tellico Reservoir Land Management Plan EIS. Initial public comments were provided in response to a mail-in questionnaire conducted in 1997. On January 28, 1999, TVA hosted a public scoping meeting at Lenoir City High School, Lenoir City, Tennessee. Attendees were invited to complete a questionnaire identifying issues and concerns regarding proposed actions for the Tellico Reservoir area. Additionally, TVA received public comments through March 1999 via letters, electronic mail (e-mail), phone messages (1-800-TVA-LAND), petitions, and a supplemental questionnaire.

Public Comments Analyses

All responses were reviewed and included as part of the public comments being considered in the Land Use Plan EIS. Analyses are based on the following:

- 451 letters
- 134 e-mail messages

- 102 phone messages
- 99 Tellico scoping questionnaires
- 483 supplemental questionnaires
- 2 petitions
- 120 comment cards

All comments were analyzed for content, and a number of prevailing themes were identified. Many themes, e.g., *Development*, were further divided into sub-themes, i.e., *control/limit development, economic impact of development, oppose development—commercial, industrial, or residential*. Comments representative of a particular theme/sub-theme were identified and provided below. When applicable, frequencies (the *number of times* a comment was made) were computed and included with each theme/sub-theme.

Summary of Public Comments Analyses

Figure 1 displays the distribution of major themes summarized in the Tellico Land Use Plan Environmental Assessment (EA) completed in 1997. The pie chart illustrates the percent of comments relating to the each major theme. Approximately 200 individuals were surveyed regarding what they value most about TVA land around Tellico Lake, major problems or issues that must be dealt with regarding TVA's management of Tellico Lake, and the features they want to see when looking at the land around the reservoir.

Figure 1. Public Comments, EA – 1997

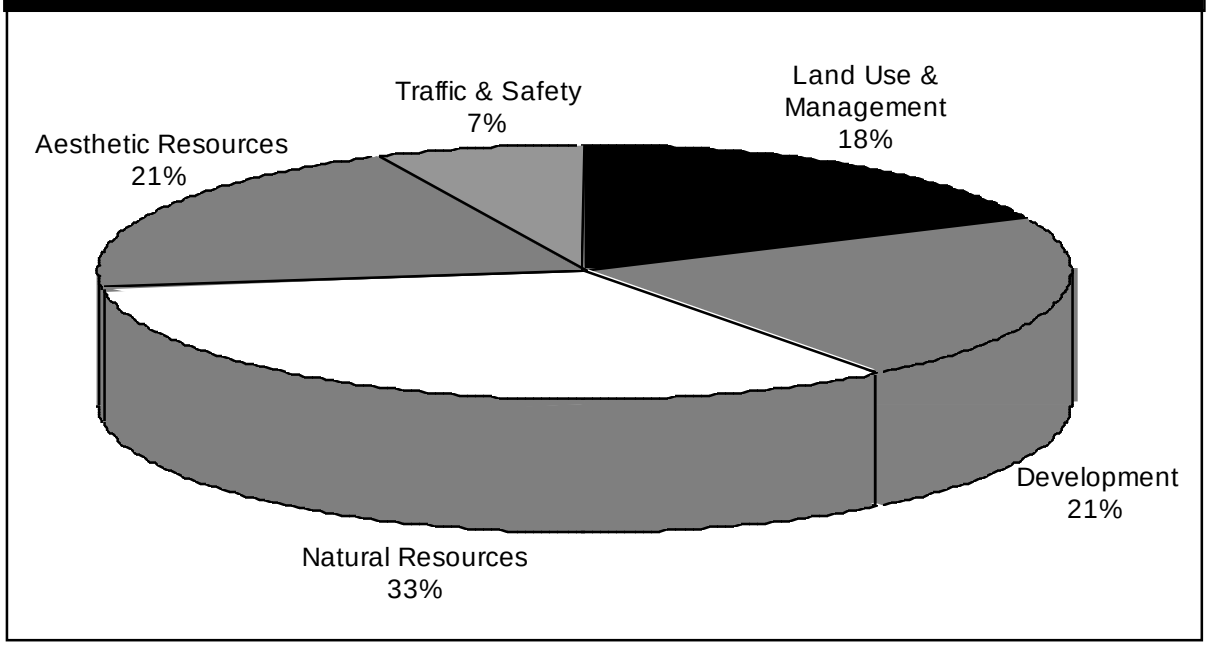

Figure 2 (next page) displays the distribution of major themes summarized in the Tellico Land Use Environmental Impact Statement (EIS). The pie chart illustrates the percent of comments relating to the each major theme. This distribution is based on approximately 750 individuals' comments received by questionnaire, letter, telephone, and e-mail. Petitions (signed by 1502 individuals), 120 public meeting comment cards, and an additional questionnaire are summarized in separate sections of this report.

In both scoping reports, the majority of comments concern development, natural resources, and land use/management. Aesthetics were more of a concern in the EA, whereas economic issues emerged in the EIS as an important issue.

Figure 2. Public Comments, EIS – 1999

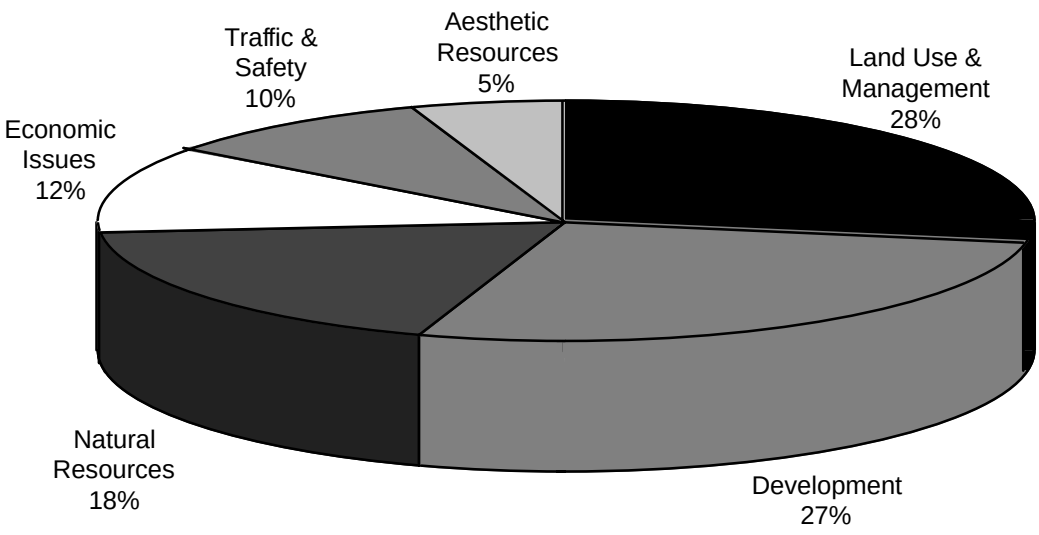

Figure 3 (next page) displays the distribution of comments regarding the proposed land use proposals—River Corridor, Greenway, and Tellico Landing, Inc. (TLI) (see Appendix I for a description of each proposal). The majority of comments were in opposition to TLI, and these comments out-numbered those in support of any other land use alternative, though there appears to be public support for a Greenway. Many comments expressed dissatisfaction with the scope of the TLI proposal, the commercial use of public land, the need for a more detailed master plan with funding considerations, and the impact of the proposal on the surrounding area. There were many comments expressing concern that publicly-owned land should remain for public use.

Table 1 displays all of the themes (general issues and topics) and sub-themes (specific issues and topics related to a particular general theme) that were identified during scoping for the Tellico Reservoir EIS. Themes are listed with their respective sub-themes, along with the number of public comments associated with the theme or sub-theme (frequency) in the adjacent columns. Themes are listed in descending order with the highest frequency theme—*Land Use*—listed first.

In summary, many of the public comments raise issues that are in response to development. For example, there were concerns about the impact of development on boating and car traffic/safety as well as concerns about crowding and pollution. Many natural resource issues involved the impact of development on water quality, erosion, litter, and wildlife habitat.

Specific issues regarding development focused on the economic impact of development on the economy and labor market, concerns about the impact on existing infrastructure, and the associated costs for new construction. Finally, there were also many comments expressing opposition to commercial development and high density housing developments.

Figure 3. Land Use Proposals

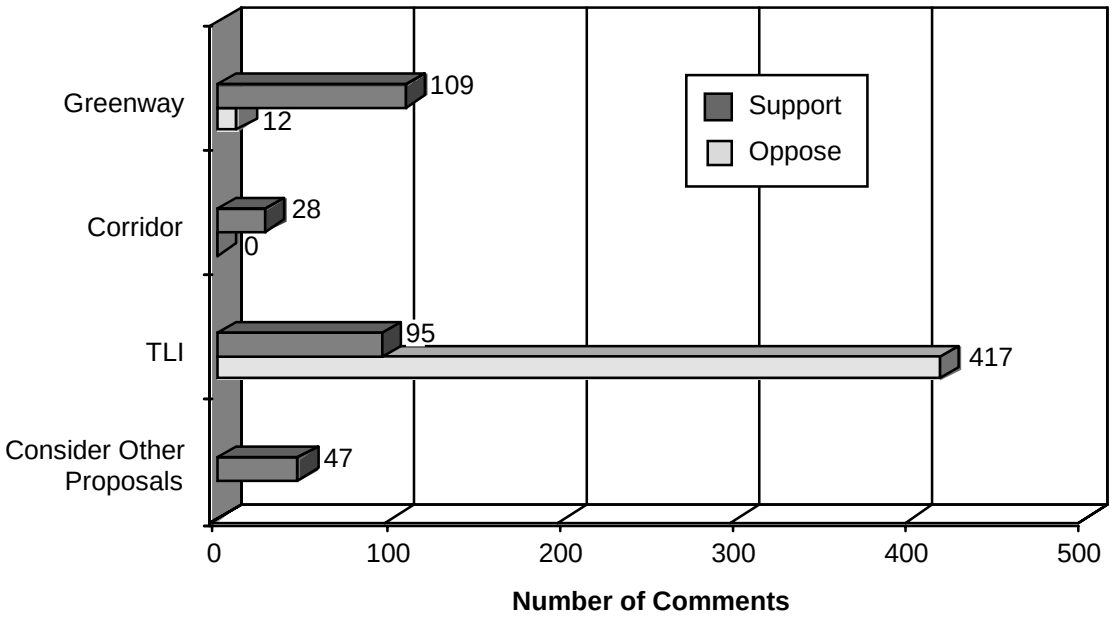

Table 1. Public Comments Themes, EIS - 1999

Land Use	1269
General Comments	6
Consider Other Alternatives	10
Greenway	138
General Comments	17
Oppose Greenway	12
Support Greenway	109
Land Acquisition	58
Unfair Land Acquisition	36
Return Land to the People	22
Land Use Plan	112
Public Access	88
Public Land	137
River Corridor	35
General Comments	7
Support Corridor	28
State Park	37
Tellico Landing, Inc. (TLI)	648
General Comments	91
Oppose TLI	417
Support TLI	95
TLI Funding	45

Natural Resources	273
General Comments	102
Cultural	29
Wildlife	142
Management	**259**
General Comments	30
TDEC	5
TRDA	60
General Comments	26
Oppose TRDA	32
Support TRDA	2
TVA	150
General Comments	71
Oppose TVA	65
Support TVA	14
TWRA	14

Public Input	81
Public Participation	38
Scoping	43

Erosion	56
General Comments	15
Shoreline Erosion	32
Soil Erosion	9

Development Issues	842
Balance with Environment	10
Control/Limit Development	77
Economic Impact	214
Infrastructure	180
Oppose Development	327
General Comments	138
Oppose Commercial	150
Oppose Industrial	4
Oppose Residential	35
Support Development	34
General Comments	6
Support Commercial	2
Support Residential	26

Pollution	403
General Comments	96
Litter	16
Noise	102
Sewage	37
Water Quality	152

Traffic	270
General Comments	67
Boat Traffic	81
Car Traffic	96
Crowding	26
Aesthetics	**184**
General Comments	21
Natural Scenery	139
Structural	24

Recreation	159
General Comments	43
Formal Recreation	77
Informal Recreation	39

Safety	113
General Comments	18
Boating	62
Policing and Crime	33

Taxation Issues	76

Quality of Life	27

Requests for Information	13

Public Comments Analyses

Letters, E-mails, and Telephone Messages

Public comments via letters, electronic mail (e-mail), and telephone messages were compiled and analyzed to identify the range of issues and concerns that should be considered as part of the scoping process for Tellico Lake. From the comments provided, 14 themes and 47 additional sub-themes were identified and are listed below. Comments representative of a particular theme/sub-theme were identified and provided below. A frequency count (the *number of times* a comment was made) is displayed in parentheses.

Themes (frequency)
Sub-themes (frequency)
Comments

Aesthetics (155)

General Comments (13)
The proposed alternative will have negative impacts on the current visual appearance.

Tellico is the most beautiful lake in the TVA system.

Natural Scenery (126)
One of the true attractions of this area is its natural beauty.

We chose Tellico Village because of the pristine beauty of the lake and mountains.

Structural (16)
No building, no matter how well designed, can compete with the natural shoreline.

Development Issues (697)

Balance Development with Environment (10)
There needs to be a balance of developed and undeveloped lands.

Control/Limit Development (62)
Will there be rules and regulations applied to prevent development from becoming a "tourist trap?"

Compatible commercial, industrial, and residential development should occur in an orderly and planned manner.

Economic Impact (174)
This county is not economically depressed and does not need economic stimulus.

Jobs created from these commercial developments would be low-paying, seasonal jobs that do not benefit the county.

Infrastructure (149)

Proper placing of roads, utility, sewage, water lines, plus buildings and maintenance facilities will be a challenge.

The community infrastructure is not capable of assimilating the additional traffic this development would produce.

The infrastructure costs of a dramatic increase in population and traffic are hidden.

Oppose Development (276)

General Comments (106)

I am opposed to developing any land around Tellico Lake.

I am concerned about the continued loss of public land and want to protect the natural beauty of the area.

Commercial (134)

It is important to TVA, the state of Tennessee, and the local residents that no further commercial development take place on these public lands.

The lake and its surrounding areas are too valuable a resource to be spoiled by commercial development.

The commercial aspects of the project are undesirable, unneeded, and unwanted.

Industrial (4)

Additional industrial sites will cause problems.

Residential (32)

We do not need any more waterfront lots.

The proposed high density residential settlements will have a devastating effect of what is left of the character of the area.

Support Development (26)

General Comments (5)

Development will open up to the public one of the prettiest and cleanest lakes in the system.

Commercial (2)

I support the effort to develop a tourist destination on the Tellico Reservoir.

Residential (19)

I support developing residential sites on the shores of Tellico Lake.

Erosion (44)

General Comments (13)

Erosion will be increased.

Shoreline Erosion (26)

Increased water traffic will greatly increase shoreline erosion.

Shoreline erosion, already a problem, will be significantly accelerated.

Soil Erosion (5)

I am concerned about possible soil erosion.

<u>Land Use Issues</u> (1096)

Consider Other Alternatives (10)

Please consider an alternative plan that would protect and preserve this public land and our natural environment.

Greenway (97)

<u>General Comments (12)</u>

Our major concern with this alternative is where this greenway should begin and end.

Issues related to noise, nuisances, aesthetics, habitat loss, and pollution are relevant to the greenway.

<u>Oppose Greenway (6)</u>

The proposed greenway system seems to be an unwise and unnecessary use of resources.

<u>Support Greenway (79)</u>

I wish to see the land put into a greenway.

I support the greenway as long as it serves to retain the natural beauty and wildlife.

Land Acquisition (56)

<u>Unfair Land Acquisition (36)</u>

Land was forcibly taken from people years ago.

<u>Return Land to the People (20)</u>

Return the land from the people you stole it from.

Land Use Plan (106)

The utilization of this land for this purpose is in direct conflict with the original TVA master plan, the Shoreline Initiative Plan, and the Loudon County Growth Management Plan.

There are no compelling reasons to change the master plan.

Public Access (71)

Maintain the public access for multiple recreational uses.

I think the public should be able to use and enjoy this property.

Public Land (128)

I am against selling land to public developers.

Public land should be held for public use.

River Corridor (20)

General Comments (5)

The river corridor should maintain its natural character.

Support Corridor (15)

A river corridor is a reasonable alternative.

State Park (29)

A state park would be the best possible use of this pristine land.

A state park would preserve the scenic beauty, wildlife, and natural resources of the area.

Tellico Landing, Inc. (TLI) (579)

General Comments (78)

The proposal lacks any real details upon which to adequately estimate the potential impacts to residents and the area.

Where is the detailed master plan regarding who controls future changes of the project and who has ultimate financial responsibility?

Oppose TLI (369)

I am opposed to the Tellico Landing project and request that TVA decline to sell any public lands for this purpose.

The proposed development plans would be extremely undesirable for the designated area and the county.

We are against using this TVA land for a live entertainment park, a 20,000-seat amphitheater, and various rental and commercial facilities.

Your proposed development will spoil the environment we call home.

Support TLI (94)

I am in favor of the proposed Tellico land development.

TLI is progressive enough to provide positive economic development in the region, while conservative enough to maintain and preserve the natural and historic resources of the area.

TLI Funding (38)

What financial assurances are there that the proposal will be completed?

We do have concerns about the financial capabilities to successfully undertake and complete such a large complex project.

Management (235)

General Comments (22)

I think there needs to be a consortium of nonprofit groups.

If you can't take care of this public land, turn it over.

Tennessee Department of Environment and Conservation (TDEC) (3)

I applaud TDEC for their expressed interest in the future development and management of a greenway.

Tellico Reservoir Development Agency (TRDA) (58)

General Comments (26)

TRDA should not sell any of this land for economic development.

Oppose TRDA (30)

TRDA has not been as good a caretaker of our public lands as we had hoped.

Please do not turn these lands over to TRDA.

Support TRDA (2)

The strategy of TRDA has been a success.

Tennessee Valley Authority (TVA) (140)

General Comments (61)

Now is the time for TVA to serve the purpose for what is was originally intended.

TVA, as a government agency, has a responsibility to ensure that any lands under its jurisdiction are managed for the greatest public good.

Oppose TVA (65)

We feel the TVA is betraying the county's citizens with this sale when there are so many alternatives for its use.

I am quite concerned that TVA would ever consider offering public land, purchased with our tax dollars, up for sale.

Support TVA (14)

TVA is largely responsible for the beneficial development of east Tennessee.

We highly commend the TVA for their foresight and good management in bringing and maintaining this wonderful resource to those of us who live in east Tennessee.

Tennessee Wildlife Resources Agency (TWRA) (12)

Turn the land over to the Tennessee Wildlife Association to manage public lands.

Natural Resources (206)

General Comments (71)

I am concerned about the impact of development on the ecological diversity in the area.

Development should emphasize sensitive resource management that allows for the preservation and enhancement of wetlands, biodiversity, archeological and historic resources, and natural resource conservation.

Cultural (27)

This development will maintain the history of the region.

I am primarily concerned about the potential impact on cultural and archeological resources in the Tellico Reservoir area.

Wildlife (108)

The loss of wildlife habitat and subsequent displacement due to residential/commercial development is a concern.

Keep as much land as possible open for wildlife.

Pollution and Environmental Issues (324)

General Comments (82)

Air pollution can be avoided by not allowing it to be generated on the shore of Tellico Lake.

Consider the impact of pollution.

Litter (8)

It can be expected that paper food wrappers, beverage containers, etc., will be discarded on the grounds and in the lake.

Noise (79)

There will be significantly more noise pollution from the increase use of the land and water.

The noise pollution from such a large development would spoil the tranquillity of the area.

Sewage (33)

We are concerned with the location of the necessary disposal of wastewater from a large residential and recreational complex.

The proposal will put additional strain on the water treatment and sewage treatment facilities in the area.

Water Quality (122)

No matter what precautions are taken, a development like this will certainly add contaminates to the lake.

Evaluate the impact of construction activities, golf courses, high peak runoffs, sewage treatments, fertilizers, pesticides, insecticides, increased suspended solids, point and nonpoint discharges, and other pollutant sources.

Public Input (71)

Public Participation (28)

Citizen input should have come as a number one concern.

TVA needs to involve the people affected by their decisions in discussion regarding the future of the land.

Scoping (43)

The EIS must address more than the simple change in land use designation which is required before TVA lands can be sold.

I was disappointed with the lack of foresight in organizing the public meeting.

Quality of Life (27)

It is imperative to maintain the quality of life in this area.

This project would create many problems for a county that is striving to maintain a high quality of life in a semi-rural environment.

Recreation (122)

General Comments (33)

More recreational opportunities will be beneficial.

TVA lands need to be developed to provide recreational areas that preserve the natural beauty of the land and river.

Formal Recreation (58)

Open the land up to hiking trails, more camping sites, and more boat launch areas.

A far better use of land would be to have non-motorized trails and picnic areas.

Informal Recreation (31)

Swimming, fishing, and boating as is now enjoyed will no longer be possible.

The loss of free hunting and fishing on 825 acres now controlled by TVA for public use is a serious loss to the outdoor sportsman.

Requests for Information (13)

I would like a copy of the proposed Tellico initiative.

I would appreciate it if you would keep us advised regarding this project.

Safety (93)

General Comments (15)

Consider the impact that thousands of additional people using the lake will have on safety.

Boating (50)

The increased boat traffic associated with development will maximize the level that Tellico Lake can reasonably accommodate.

We would appreciate to hear any TVA plans to combat immature and irresponsible boating on the Tellico Reservoir.

Policing and Crime (28)

The possibility of local residents being victims of violent crime will significantly increase.

Traffic (217)

General Comments (60)

Development will devastate our quiet, rural area with an influx of traffic.

Traffic and transportation costs will be significant and costly.

Boat (60)

Additional boats and personal water craft will make Tellico Lake overused and overcrowded.

The danger level of boating by irresponsible boaters would increases unless restrictions on speed are introduced and enforced.

Car (78)

We are concerned about the traffic on the roads that will significantly increase due to development.

Traffic congestion and/or accidents would greatly inconvenience the working public and could possibly affect access to emergency services.

The traffic intensity on Route 321, canal bridges across the lake, and other roadways would increase a considerable amount.

Crowding (19)

The lake is already too crowded.

We shudder to think of the large number of people that would be drawn to the area.

Taxation Issues (74)

I am concerned about increased taxes to added utilities and other currently unavailable services that would be needed for the development area.

It is entirely possible that area residents will become unwillingly responsible for the costs associated with the project.

Tellico Questionnaire Analysis

During a public scoping meeting held on January 28, 1999, at Lenoir City High School, Lenoir City, Tennessee, attendees were invited to complete a four-item questionnaire regarding the range of issues and concerns that should be considered as part of the scoping process for Tellico Lake. Listed below are the various themes and sub-themes identified from the questionnaire responses. Comments representative of a particular theme/sub-theme were identified and provided below. A frequency count (the *number of times* a comment was made) is displayed in parentheses.

Question 1: What issues should be addressed concerning the designations of portions of the Tellico River as a "River Corridor" to maintain its natural character?

Themes (frequency)
Sub-themes (frequency)
Comments

Aesthetics (13)

General Comments (6)
How will the river corridor's natural character be affected?

If the natural character is to be maintained, then it must be left as natural as is.

Natural Scenery (6)
Preserve the wild, natural, and scenic beauty.

All effort should be concentrated to maintain this river corridor in its current natural beauty state.

Structural (1)
There should be no negative visual impacts along the shoreline such as docks and homes.

Development Issues (29)

Control/Limit Development (3)
There should be minimum development, restricted to improving public access to this amenity, with limited construction of facilities to accommodate public usage.

Commercial development without clear and concise restrictions and covenants will drive an environment of greed, corruption, noise, and pollution.

Economic Impact (2)
How can continued high impact .i(e., high density, commercial development of the shoreline) be justified in prosperous, growing, low unemployment Loudon County? The real need is for quality, stable, higher paying employers.

Impacts and benefits to local economy.

Infrastructure (1)

The adequacy of existing roads and bridges is an issue.

Oppose Development (21)

General Comments (15)

Leave it natural; do not develop.

Our preference is to leave the east side of Tellico Lake as natural as is possible.The property should not be sold to private developers under any circumstances.

Maintain the shoreline in its present state as much as possible.

Commercial (5)

Keep commercial development completely away and separate from the river corridor.

There should be absolutely no commercial developments.

Loudon County definitely does not need an amusement park.

Residential (1)

Prevent high density housing.

Support Development (2)

General Comments (1)

Open up some development in upper portions of lake in upper part of Monroe and lower part of Blount Counties on Highway 72 East.

Residential (1)

If it must be developed, then only home sites and golf courses.

Erosion (5)

General Comments (2)

I think there should be a corridor all along the river ways to slow the process of erosion.

Shoreline Erosion (2)

Having lived on Lake Sidney Lanier, a Corps of Engineers lake project in north Georgia, I have seen what unanticipated erosion, pollution, etc(, can do to a lake that has less vulnerability to these hazards because of its area/volume to shoreline ratio.

The development of shoreline docks and larger and larger marinas has resulted in very large boats (25 feet plus) that not only do major damage to the shoreline but also reduce the outdoor experience.

Soil Erosion (1)

Prevent erosion of soils.

Land Use Issues (33)

General Comments (3)

No lands should be sold, leased, or otherwise given to anyone for any type of private water-use facility.

Permanently redesignate "cultural/public use/open space" to "natural wildlife("

Greenway (4)

Oppose Greenway (2)

Compare the "as is" condition of the area now to the few benefits and many negative qualities of a greenway.

Support Greenway (2)

All of Tellico River from Lenoir City to River Mile 20 needs to be a greenway area!

All of Tellico River starting at Mile Marker 0 should be a greenway corridor for the use of all people to be able to use the land and the water.

Land Acquisition (1)

Return Land to the People (1)

I feel this land should be left alone as TVA land or returned to its rightful owners.

Land Use Plan (1)

A piecemeal conveyance of the 217 acres outside the master plan of TVA is itself a breach with the public.

Public Access (3)

Access should be addressed.

There is presently public access to many areas in the corridor, and they are minimally used.

Vehicular entry and egress.

Public Land (3)

TVA land should be retained for public use.

When the original planning and commitments were made there was much more land designated to public use and wildlife…each time TVA reviews Tellico, another large section of public land falls to the developed side of land use.

River Corridor (15)

General Comments (2)

I feel that the river corridor should be used for passive nature/recreational uses (such as trails, wildlife conservation/observation, fishing and hunting, and open space uses) and to preserve natural beauty of the river.

Support Corridor (13)

The river corridor is a very good idea for limiting developments all along the river and for preserving as much as possible of the shoreline's natural beauty.

This is an excellent concept and should be applied to as much of the river as possible.

Designation as a river corridor is consistent with the Goals 2000 growth plan developed in 1998 by Loudon County.

Tellico Landing, Inc. (TLI) (3)

Oppose TLI (2)

To maintain the natural character of a river corridor would appear to require eliminating or greatly reducing any commercial exploitation from the TLI proposal.

Support TLI (1)

I'm not involved with Tellico Landing, but I am in favor of its development.It is a shame what happened in the past, but time goes on and progress must be made to insure the future.

Management (7)

General Comments (1)

I see three different agencies as choice for the goal of preservation while maintaining the lake and river's natural character—TWRA, TDEC, State Parks or State Forest.

Tennessee Department of Environment and Conservation (TDEC) (2)

It would be appropriate for TVA to transfer management of all of the TVA public-owned land on the Tellico Reservoir to the TDEC.

Tennessee Valley Authority (TVA) (2)

General Comments (2)

TVA has a moral and environmental responsibility to protect the beauty and environmental integrity of the Tellico River.

I favor natural resource conservation and management by TVA, since private owners are not knowledgeable about these resources, resources which enrich everyone who uses the lake.

Tennessee Wildlife Resources Agency (TWRA) (2)

This property should be left natural with TWRA managed wildlife preserve.

Natural Resources (20)

General Comments (9)

Natural support and protection of the environment, habitat for animals, and plant life are required to maintain the natural character of the river.

The environment should not be impacted to a great extent, and there should be enough woodland to support life and the banks of the river.

Issues to consider are wildlife and forest management.

Wildlife (11)

Keep land in an undeveloped state to preserve animal habitat.

Put the welfare of wildlife first…we are not the only species.

To develop the area in question means destruction of the forest areas and the demise of animal and bird habitats.

Pollution and Environmental Issues (9)

General Comments (1)

Ecologically, the erosion and pollution of Tellico Lake due to higher density transient boat traffic, marginal shoreline protection, maximum quantity of sewage effluent, and golf course fertilizer runoff all have very negative impact on a lake that is quite small in area and volume but large in shoreline.

Litter (1)

Ninety-five percent of the plastics, bottles, garbage, etc(, tend to come from boaters and fishermen who do not live in the immediate area.

Noise (3)

Noise pollution is a concern(

Water Quality (4)

What rules will apply to the Tellico River usage to keep it safe and clean?

Preservation of water quality is an issue.

Recreation (10)

General Comments (1)

We wholeheartedly oppose development of this land as anything but natural, low impact, public recreation(

Formal Recreation (6)

I am in support for the installation of primitive camp grounds for boy scouts and girl scouts, hiking trails, and canoe rentals.

There are needs for day-use facilities.

The area should have a visitor centers with parking.

Informal Recreation (3)

I support recreational uses that are generally passive in nature (e(g., trails, fishing, hunting, wildlife observation, and general open space uses) and are located in specified areas that do not interfere with the natural beauty of the river.

Safety (7)

General Comments (1)

Lake and river boating safety are at risk from inability to police such large bodies of water adequately.

Boating (6)

Increased boat traffic, especially with inexperienced operators would create a crowded, unsafe condition.

Jet skies are always a safety problem and one-time boat renters are always difficult due to inexperience and an uncaring attitude.

Traffic (10)

General Comments (2)

Traffic is an issue(

Boat (8)

Tellico Lake is not wide enough to support a lot of boat traffic.

Boating traffic would be very heavy, especially on weekends.

Don't allow them to include marinas, jet-ski areas, etc.Everyone should be able to enjoy the beauty of the river. Just don't overrun it with boats.

Question 2: A trail and recreation "greenway" managed by the State of Tennessee Parks Division may be proposed from River Mile 7 to about River Mile 20 along the eastern shoreline of Tellico Reservoir. What issues or problems should be addressed concerning the "greenway" concept?

Themes (frequency)
Sub-themes (frequency)
Comments

Aesthetics (6)

General Comments (2)
Preservation of scenic beauty is a concern.

Structural (4)
Height limits should be put in for signs and buildings to prevent their blocking of the greatest thing the lake has to offer—a view of the mountains.

There should be no negative visual impacts along the shoreline such as docks and homes.

Development Issues (11)

Control/Limit Development (2)
The greenway should be maintained to keep commercial development at some distance from shoreline for watershed purposes.

Economic Impact (1)
There is the issue of getting enough workers to handle the additional needs. It is very difficult now to get and keep workers.

Infrastructure (3)
Extend east Tellico Parkway to the north end of the greenway.

What about the personnel required for garbage pick-up, ranger requirements, population impact on area?

Oppose Development (5)

General Comments (3)
I prefer the area be left in its pristine state.

Commercial (2)
Selling or giving ownership of a trail and recreation greenway to commercial developers would be a big mistake. Sooner or later, someone will come up with the idea to build hot dog stands, mini restaurants, souvenir shops, gaudy picnic pavilions, etc.

Erosion (2)

Shoreline Erosion (1)

The lakeshore still needs to be maintained to minimize erosion.

Soil Erosion (1)

Any decisions should keep in mind the effects on land erosion.

Land Use Issues (51)

Greenway (37)

General Comments (5)

The greenway should be kept green with at most a hiking trail, and a few isolated picnic tables, trash cans, and porta-johns, co-located with parking spaces.

We believe the best place for a trail and recreation greenway would start at River Mile 0 and go south for only as far as is absolutely necessary.

Oppose Greenway (4)

I truly believe if a survey or study of other counties' greenways was conducted, the true number of users to the number of people in that county would show that very few people really use these areas. The cost of upkeep outweighs the uses.

The Parks system has difficulty maintaining existing parks and we should not add to the burden.

Support Greenway (28)

The greenway concept is desirable and should extend the entire way to Highway 321.

A trail and recreation greenway managed by the state that would preserve the beauty and natural character of the shoreline is a good idea.

Extend the concept and have it run from 0-20 River Miles.

Land Use Plan (1)

Preserving the greenway is what TVA had going for it in the original plan.

Public Access (8)

One of the main concerns is over the access and parking for the corridor.

Make most access from the land side and not from the water side.

Time limits should prevent people from using them at all hours of the night and also to prevent lake user from accessing the restrooms.

Tellico Landing, Inc. (TLI) (3)

General Comments (3)

It is a better idea to move shore preservation closer to the dam than to the Mile 9 location. In fact, switching its location with the Tellico Landing would seem to make more sense.

State Park (2)

The whole area should be turned into a state park, not just a greenway.

Management (4)

General Comments (4)

Who would maintain the greenway? Even the Great Smoky Mountains Park has major problems with lack of funds?

By becoming managed by the state of Tennessee parks, does that mean that full time personnel will monitor the trails?

Natural Resources (19)

General Comments (14)

This area should be kept in a natural state to preserve the ecology for future generations.

The damage that will be caused to the trees and plant life needs to be considered.

Natural shoreline and natural wildlife must not be impacted.

Cultural (1)

Consider a rural life center for each historic preservation community site (i.e., Morgantown, Old Virginia Fort, Coytee Indian Camps).

Wildlife (4)

Wildlife displacement and loss of habitat are issues.

Any decision should keep in mind the effects on plant and animal life.

Pollution and Environmental Issues (10)

Litter (3)

Trash thrown into the river is an issue.

Water Quality (7)

Any decisions should keep in mind the effects on water quality.

Parks use fertilizers which choke the waterways with poisons to fish and wildlife; this encourages algae growth and unsightly water/shoreline conditions.

Recreation (18)

General Comments (4)

Golf does not represent all recreation. Hunting, fishing, boating, bird watching, family outings in coves, etc., are all very important forms of the cross-section of local citizens that own this land.

Consider recreation possibilities.

Formal Recreation (13)

Overnight campgrounds and restroom facilities.

I strongly oppose campgrounds and cottages; hiking trails, picnic tables for daily use as the Smokies provide should only be provided.

The venues of the greenway should be preserved for hiking, horseback riding, and biking trails.

Informal Recreation (1)

Hunting and other activities (horseback riding, etc.) should not be affected.

Safety (6)

General Comments (2)

Who would monitor for safety of the people?

Policing and Crime (4)

There will be a need for increased personnel for enforcement (on the trails and at trail heads) to limit use of remote areas for unsavory criminal activities.

A greenway sounds like a good idea but will need to be maintained and kept orderly (e.g., groups of boaters and jet skiers prevented from docking on the shore and collecting for after parties).

Traffic (5)

General Comments (2)

Traffic into the area will create problems.

Boat (1)

Lake traffic is reaching a saturation point.

Car (2)

Highway 321 already serves as a corridor to the Smokies with traffic of trailers, mobile homes, RVs and the like, pushing it beyond its safe two-lane limit.

Question 3:What issues should be addressed concerning the proposed Tellico Landing, Incorporated, project and plan?

Themes (frequency)
Sub-themes (frequency)
Comments

Aesthetics (7)

Natural Scenery (4)

It appears that the proposed commercial development will destroy the natural beauty of the lake.

The attraction of this area is its natural beauty.

Structural (3)

Consideration should be given for a Hilton Head-type model of growth and development along Highway 321 between Fort Loudoun Dam and Maryville where facilities are set back in the trees in natural settings; gaudy signs and lighting are not permitted; and communities are gated.

Development Issues (71)

Control/Limit Development (6)

Why let them have so much of the prime shoreline strip without requiring inland development instead?

Make sure that the commercial elements of Tellico Landing are located close to the 321 bridge and the residential upstream.

Only similar housing to what already present should be considered if developed.

Economic Impact (30)

The planning and economic strategies for high- tech, high-pay jobs should be proposed to initiate growth and not be many minimum wage jobs that this proposal would provide.

I am concerned about the influx of workers with low skill sets needed to occupy low-paying, seasonal jobs.

Consider the large transient population impact on total geographic area and the economic costs resulting from such exploitation by opportunists and obligation free visitors to land and waterways.

Infrastructure (22)

The impact to Loudon County infrastructure will include school systems, utilities, fire protection, emergency response, police, household waste, road construction and maintenance, and medical services.

Highway 321 from Interstate 75 could not support or handle the increase tourist and business traffic.

All roads must be improved.

Oppose Development (9)

Commercial (7)

Allowing this development will open the door for continued development. Stop the development on this lake.

Residential (2)

The number of housing units proposed bring another set of problems including displacement of wildlife from wooded areas, increased fertilizer runoff from house and golf courses into the lake, increased traffic on local secondary roads, lack of sanitary sewer access, and increased crime potential.

Support Development (4)

Residential (4)

Limit the proposal to residential development located north of Upper Bend near dams.

Without the commercial aspects, a residential development would be much less undesirable.

Erosion (4)

Shoreline Erosion (2)

Bank erosion from boating traffic is an issue.

Soil Erosion (2)

Soil erosion from construction is an issue.

Land Use Issues (63)

General Comments (3)

Is this the best use of the land?

Land Acquisition (1)

Return Land to the People (1)

If they really want to go through with this project, they should sell the land back to the people they bought (stole) it from and let them have the option to sell it or keep it.

Land Use Plan (2)

The proposal is incompatible with the original land use plan.

Public Access (4)

One of the first major concerns regarding the proposal is the highway access

There should not be any public access other than homeowners.

Public Land (4)

Any development of land for the people should be by the people (i.e., state or local government's parks and recreation department).

Do not sell or develop any public land now managed by TVA or TRDA.

State Park (2)

The best way to give the land back to the people is to make it a state park that everyone could enjoy.

Tellico Landing, Inc. (TLI) (47)

General Comments (6)

Viability of the Tellico Landing project being completed as proposed; credibility of the developers; developers' experience in similar types of development projects.

It appears to be a very piecemeal approach.

Oppose TLI (35)

The project and plan would destroy the original intent for this land.

If this project goes forward, it will create havoc on the waterways and especially on the roads in the area.

The historical items listed are already available in the area and are not needed. Also, area golf courses are under-used, and more are not needed.

TLI Funding (6)

TLI seems very weak financially, leaving Loudon County potentially stuck with a half-developed, ruined piece of land…please provide a cash flow diagram for the ten-year timeline of the project, concrete ten-year development plan with milestones, and a contingency plan to account for setbacks, delays, and funding snafus.

Financing for each of the proposed areas is an issue.

Management (8)

General Comments (2)

How well will the land be managed? What things will be conserved and reserved?

Tellico Reservoir Development Agency (TRDA) (2)

Oppose TLI (2)

Much of the land taken by the Tellico project has already been developed by private industry or private developers. TRDA is an arm of these developers and should have little if any interest in the remaining lands owned by TVA in Loudon County.

Tennessee Valley Authority (TVA) (4)

General (4)

TVA should retain all of its lands for public use.

Does TVA have to make a profit from the land to appease the Congress?

Natural Resources (22)

General Comments (5)

Do not allow them to denude the shoreline. No tree removal should be allowed except for trails down to dock areas.

The proposal has no advantages to the area—only degradation of the environment.

Cultural (1)

Disturbance of archaeological sites is an issue.

Wildlife (16)

Damage of natural wildlife is an issue.

I am concerned about the displacement of wildlife from wooded areas to surrounding properties.

Pollution and Environmental Issues (49)

General Comments (10)

Environmental issues including runoff/erosion, sewage treatment, adequate access on highways and roads will be significant.

The pollution would be awful.

Litter (4)

Disposal of trash by lake visitors must be considered.

Noise (19)

Noise pollution from "music theater" is a concern.

The increased traffic and noise across the lake is an issue.

A waterfront amphitheater would be an environmental disaster from noise and light pollution standpoint.

Sewage (3)

The lack of sanitary sewer access is a concern. If the developer depends on septic systems, the potential for groundwater contamination increases.

Water Quality (13)

Wastewater disposal from the 700 housing units; chemical runoff from the golf courses and lawn into the lake must be considered.

Urban runoff into the lake carrying mud, pesticides, herbicides, fertilizers, grease from roads, oil as well as discarded trash and garbage from users of this type of development is not the most desirable nor acceptable use of this land as outlined in the Loudon County Growth Plan.

Public Input (3)

Public Participation (3)

Let the people from the affected counties vote if TVA should sell the land that was stolen from their family and friends.

Options for development should have been sought from people who live or work in the surrounding region.

Recreation (5)

General Comments (3)

The public land available for hunting, fishing, and recreation is a big attraction.

It seems that Loudon and Monroe Counties are already abundantly blessed with golf courses.

Informal Recreation (2)

There will be a negative impact on current sporting activities, i.e., fishing, hunting, water skiing, and swimming.

Safety (4)

Boating (3)

I am concerned about fatal boating accidents due to overcrowding conditions and dangerous boating conditions for teenagers.

Policing/Crime (1)

High-priced housing with increase value draws a certain criminal element to the area.

Traffic (25)

Boat (7)

Increased boating traffic is an issue.

Consider the amount of boat traffic that will be added to the lake. Summer weekends are crowded already.

Car (14)

The proposed amphitheater is entirely too large a facility for this area. That large a crowd would result in putting 5000-7000 cars on Route 321 after every performance. Even after 321 is widened, it will not support that level of traffic.

Road traffic congestion in area of Fort Loudoun Dam must be considered.

Crowding (4)

I am concerned about the concentration of people and buildings.

Taxation Issues (2)

Will it be worth the tax money we pay out?

Question 4: What other issues/concerns should be addressed that may impact the planning of TVA land use on Tellico Reservoir?

Themes (frequency)
Sub-themes (frequency)
Comments

Aesthetics (3)

Natural Scenery (3)
This area has been gifted with such natural beauty.

Development Issues (34)

Control/Limit Development (4)
Maintain the present situation by allowing only residential and light commercial development and keeping other development well away from the lake.

If development is necessary, keep it residential in nature.

Economic Impact (7)
The employment rate here is high and we don't need these low-paying jobs.

The region does not need the government to promote economic development; the economy of the area is good to excellent.

Infrastructure (5)
The cost of new roadways and upkeep of old roads is an issue.

Is the infrastructure robust enough to handle the additional requirements?

Oppose Development (16)

General Comments (14)
Leave the land as is for future generations to enjoy in its natural form.

Keep it natural and do not develop.

Commercial (2)
Are we going to protect Tellico Reservoir from commercial development? Or are we going to let commercial development ruin Tellico Reservoir?

Support Development (2)

Residential (2)
I recommend that the area be developed for primarily residential use.

Erosion (1)

Shoreline Erosion (1)

No projects should be approved that increase bank erosion.

Land Use Issues (26)

Land Use Plan (2)

The land should be maintained as open space in areas so designated in the original land use plan or used in ways compatible with designations such as the river corridor or greenway.

Tellico Lake is too narrow and small to accommodate increased water use beyond the current TVA land use plan.

Public Access (2)

Let the people purchase more ingress and egress rights in zone.

Public Land (2)

Public lands should remain in the public trust.

State Park (4)

Land owned by TVA should be kept for parks and noncommercial use.

The remaining land should be preserved as a state or local park.

Tellico Landing, Inc. (TLI) (16)

General Comments (4)

Make the developers give a specific outline as to what the development will look like. The presentation they gave was far too general and lacked many specifics. Too many loop holes.

With the small number (500-700) of homeowners proposed by TLI, I seriously question the feasibility of the project as proposed.

Oppose TLI (11)

The Tellico Landing Project is totally unacceptable.

Loudon County doesn't need any more golf courses, theme parks, or anything else that would cause more traffic and all other problems that would go along with this proposal.

TLI Funding (1)

Financial condition of developer is an issue.

Management (9)

General Comments (5)

Keep your promise. Leave this land open for the local who tended it for decades before TVA and TRDA came along.

I think the TVA and TRDA authorities should be very clear in that approving this plan means destroying the area as it is and creating a development.

Tennessee Valley Authority (TVA) (4)

General (4)

I would hope that TVA would keep all the public's welfare in mind and not factor any particular group for commercialism.

TVA has taken many acres of private property from Loudon County residents and has only given the Lenoir City Park and Melton Hill Dam Park back to the people.

Natural Resources (6)

General Comments (3)

This area should be for the preservation and enhancement of historical and natural resources conservation.

Wildlife (3)

I feel that the river corridor should be used for…wildlife conservation and observation.

Public land and wildlife habitat is being lost at an alarming rate across the nation…the greatest public good will be served by maintaining the Tellico Reservoir in its natural state for wildlife and public access now and in generations to come.

Pollution and Environmental Issues (11)

General Comments (3)

Pollution is an issue.

Noise (1)

Noise pollution is an issue.

Sewage (1)

How will TLI runoff into Tellico Lake be treated?

Water Quality (6)

The health of Tellico Lake should be the most important issue.

Over-development has already destroyed the beauty and cleanliness of the lake.

Public Input (7)

Participation (7)

The people of the area should be given the opportunity in the early stages to participate in the decision making of the future of the Tellico Reservoir. TVA should provide very detailed information regarding their proposals and allow the public to comment.

Will the people who now live in the area have a real choice, or is this a done-deal?

Recreation (4)

General Comments (2)

Leave the land open for hunting, horseback riding, and other recreation.

Informal Recreation (2)

I feel that the river corridor should be used for passive nature/recreational uses such as trails, wildlife conservation/observation, fishing and hunting, and open space uses.

Safety (3)

Boating (3)

What limits can or should be placed on boat access to prevent significant deterioration of the environment and degradation of boating safety.

Traffic (13)

General Comments (3)

Traffic is an issue.

Boat (5)

If TLI is executed, the increase in boat traffic on the Tellico Reservoir will overcrowd this modest body of water.

Car (2)

I have concerns about the road traffic, particularly on 321 and the dam.

Crowding (3)

I am concerned about the influx of people and businesses to the area.

Petitions

The following petition was received by TVA and signed by 1396 individuals opposing development of TVA public lands on Tellico Lake.

I, the undersigned, oppose development of TVA public hunting and fishing and other recreation lands. With development come more car and boat traffic, marinas, golf courses, hundreds of homes, parking lots, and theme parks. The results are destructive shoreline erosion and an increase in water, air, and noise pollution on an already endangered ecosystem. Let's preserve Tellico Lake TVA public lands in their present natural state for future generations to come and enjoy.

The following themes and sub-themes were identified from this petition.

Development

Oppose Development

Oppose Commercial Development

With development come more marinas, golf courses, parking lots, and theme parks.

Oppose Residential Development

With development come hundreds of homes.

Erosion

Shoreline Erosion

The results of development are destructive shoreline erosion.

Land Use Issues

Public Land

Oppose development of TVA public lands on Tellico Lake.

Let's preserve Tellico Lake TVA public lands in their present natural state for future generations to come and enjoy.

Pollution and Environmental Issues

The results of development are an increase in water, air, and noise pollution on an already endangered ecosystem.

Recreation

Oppose development of TVA public hunting and fishing and other recreation lands.

Traffic

With development come more car and boat traffic.

A letter was received by TVA and signed by 106 individuals expressing concern about the proposals presented during the public scoping meeting on January 28, 1999, at Lenoir City High School, Lenoir City, Tennessee. The comments and concerns in the letter are based on the assumption the proposal is for a ”River Corridor” that combines the Tellico Landing, Inc., proposal, a “Greenway” which would extend approximately from Mile 7 to Mile 20, and other recreation or Natural/Wildlife Areas undefined.

The following themes and sub-themes were identified from these comments and concerns.

Development

Control/Limit Development

We are not opposed to further development based on additional residential areas, a marina (assuming certain controls) or a restaurant(s). However, we are very much opposed to over-commercialization as we view what has been presented.

Limit additional development to something along the lines of the communities of Tellico Village and Rarity Bay with possibly a marina/restaurant instead of a major commercialization of this land/seaway.

Infrastructure

What are the plans for construction to support this traffic?

Oppose Development

Oppose Commercial Development

We are very concerned that a theme park along with TEN restaurants, a golfing academy, an equestrian center, rental housing, and hotel and camping will make this another Pigeon Forge-type area and represents a significant undesirable change to the present atmosphere.

We are opposed to the commercialization of this area as proposed by Tellico Landing, Inc.

Support Development

Support Residential Development

We are not opposed to further development based on the adding of additional residential areas.

Erosion

As further growth and development occurs in this area, there is concern as to what additional erosion effects that lake traffic will have on the surrounding land.

Land Use Issues

Greenway

Support Greenway

A specified greenway with natural wildlife preserve areas along with the natural coves along the lake areas from approximately Mile 7 to Mile 20 would be a great attribute for this area.

Tellico Landing, Inc.

Oppose TLI

Commercialization, a la Tellico Landing, would completely destroy the quiet atmosphere and the perception of an ecologically undisturbed, pristine area in which to live.

Management

Would this land be titled and managed by the state of Tennessee to maintain as a Greenway?

Natural Resources

We feel the current growth in this area (i.e., Rarity Bay & Tellico Village) is largely due to the quiet atmosphere and the perception of an ecologically undisturbed, pristine area in which to live.

Cultural

Various comments have been made about local and historical considerations to the Cherokee Indians. We don't know of anything specific that has been proposed for these considerations but feel they all deserve discussion along with others that will be brought up.

Wildlife

We expect the traffic would have a significant effect on any fishing or wildlife for the entire river corridor.

The TLI proposal would apparently require many thousands of people to influx this area on a continuing basis destroying the present atmosphere, fishing, and other natural wildlife habitat.

Pollution and Environmental Issues

Concerned about noise and environmental pollution problems due to additional boat traffic.

Public Input

Participation

Local rumors have indicated that the state of Tennessee has completed a study to expand Hwy. 321 by building an overpass over Hwy. 11, then building a new four-lane bridge across the Tennessee river below the Loudoun Dam and then reconnecting to the present

Highway 321. If any of this is true, this appears as more of a done deal as was suggested at the January 28 meeting instead of a proposal for consideration.

Traffic

With the extensive facilities that have been proposed, a huge traffic volume can be expected.

Boat Traffic

Additional boat traffic would totally overwhelm the river corridor.

Car Traffic

Automobile traffic would have a substantial negative effect on existing and future facilities.

Crowding

The TLI proposal would apparently require many thousands of people to influx this area on a continuing basis destroying the present atmosphere, fishing and other natural wildlife habitat.

During the public scoping meeting on January 28, 1999, at Lenoir City High School, Lenoir City, Tennessee, participants were given the opportunity to write comments and questions on note cards regarding the range of issues and concerns that should be considered as part of the scoping process for Tellico Lake. From the 120 note cards received, 258 comments/questions regarding particular topics were noted. The largest percent of comments (26 percent) referred to development issues, and an additional 22 percent of the comments directly referred to the Tellico Landing project. Between 10 percent and 13 percent of the comments referred to the management of land, land use and crowding issues. Approximately 10 percent of the comments involved issues concerning the aesthetics of the area, safety, pollution, public participation, taxes, natural resources, public policies, and erosion. See Appendix II for a complete listing of note-card comments.

TVA received 35 letters from eighth graders attending Lenoir City Middle School and North Middle School. Approximately 90 percent of the letters were in opposition to the TLI proposal due to concerns about: pollution (water, litter, and noise); traffic; crowding; safety and crime; loss of wildlife, natural areas, and scenic beauty. The remaining 10 percent of letters supported the TLI proposal based on its entertainment value and financial prospects for Loudon County.

Tellico Supplemental Questionnaire Summary

A Supplemental Questionnaire for the Tellico Reservoir Land Use Plan and Environmental Impact Assessment was distributed by Mr. Billy Minser, a local conservationist. The questionnaire contains five questions assessing preferences regarding management issues for the Tellico Reservoir and public land around Tellico Lake.

The following table displays the responses recorded for each question. The frequency of each response (i.e., percentage of total respondents who selected that response) is provided in the far right column. Responses for each question may not sum to 100 percent due to rounding.

Question	Frequency of Response (%)
What is your preference concerning sale of public land on Tellico Reservoir managed by TVA?	
do not sell TVA's public land	**93.8**
give to TWRA	2.5
give back to original owners	1.9
give to BLM, NPS, USFS, TWRA, Forestry	0.4
leave it in natural state—never sell	0.4
sell it to the farmers for the original value	0.4
lease to homebuilders	0.2
sell/give land to state/federal government	0.2
sell TVA's public land to developers	0.2
Total respondents = 483	
Concerning the future use of TVA managed public land around Tellico Lake, what do you recommend?	
preserve the natural environment	**95.4**
give to TWRA	1.0
development and environment	0.6
give land back to the original owners	0.6
preserve wildlife habitat	0.6
resort-like development	0.6
multiple use concepts	0.4
resources for public use	0.4
convert to state park	0.2
Total respondents = 482	

Question	**Frequency of Response (%)**
Which of the following agencies would you prefer to manage TVA public land around Tellico Lake?	
TWRA	**72.9**
TDEC	16.3
TWRA and TDEC	5.0
TVA	3.3
consortium of agencies	1.3
TVA and TWRA	0.4
pre-condemnation private owners	0.2
a regulatory council	0.2
U.S. Corps of Engineers	0.4
Total respondents = 479	

Concerning public land around Tellico Lake now managed by TRDA, which do you prefer?	
preserve the natural environment	**95.4**
development and environment	2.3
give to TWRA	0.8
areas for recreation and ecosystem restoration	0.2
develop residential housing	0.2
develop, using original plan	0.2
manage resources for public use	0.2
no development	0.2
resort-like development	0.2
wildlife refuge	0.2
Total respondents = 481	

Question	**Frequency of Response (%)**
In the future, which agency would you prefer to manage public lands around Tellico Lake now managed by TRDA?	
turn over to TWRA	**70.2**
turn over to TDEC	15.8
TWRA and TDEC	5.6
turn over to TVA	4.0
continue with TRDA	1.7
TVA and TWRA	0.8
consortium of agencies	0.6
National Park Service or TWRA	0.4
U.S. Corps of Engineers	0.4
do away with TRDA	0.2
private owners	0.2
Total respondents = 480	

References

References

Akers, S. (Project Leader). 1997. *Tellico Reservoir Land Management Plan*. Scoping Report by Tennessee Valley Authority Resource Stewardship Reservoir Land Planning, Lenoir City, Tennessee.

McDonough, T. (Project Leader). 1998. *Shoreline Management Initiative: An Assessment of Residential Shoreline Development Impacts in the Tennessee Valley*. Final Environmental Impact Statement by Tennessee Valley Authority Watershed Technical Services, Norris, Tennessee.

Appendix I

Summary of Land Use Alternatives

River Corridor

This 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 interpretative activities.

The purpose of the River Corridor is to afford opportunities for the recreating public to enjoy natural settings in a riverine environment. Portions of the Tellico River have these characteristics and are worth preserving for future generations. The upper Tellico River is predominantly undeveloped, with some exceptions where subdivisions have sprouted or adjoining private land owners have developed private water use facilities. A portion of the Tellico River offers free-flowing water which transitions to a lake environment and flat water. Much of the river is not navigable for large boats, due to inadequate year-round water depth, or underwater obstructions such as tree stumps.

Some adjoining land owners have rights for lake/river ingress and egress. However, the interpretation and application of these rights for development of private water use facilities on TVA land occurs on a case-by-case basis. A River Corridor could be included in Zone 4—Natural Resource Conservation, or in Zone 3—Sensitive Resource Management, if sensitive resources are present. If a River Corridor designation is included in the approved Tellico Plan, guidelines will need to be developed which will assist in determining the type of private water use facility development which can or should occur, and where it will occur.

Greenway

This is a linear park located along natural features such as lakes or ridges, or along man-made features including abandoned railways or utility rights-of-way, which link people and resources together.

The purpose of a Greenway is to create recreational opportunities for the public to enjoy a variety of passive recreation pursuits. Interest in Greenway development grew in earnest out of recommendations in the 1986 *Tennesseans Outdoors* and the 1987 *President's Commission on Americans Outdoors* reports which highlighted means to link our communities together and preserve recreation opportunities for future generations.

Portions of Tellico reservoir have land with the appropriate characteristics worthy of Greenway consideration. One of the obvious areas is the right descending bank of the reservoir between Lotterdale Cove access area and the Lower Jackson Bend commercial recreation site. This portion of the lake offers approximately a 10-mile segment of almost pristine shoreline environment which can provide an aesthetic value for the public, recreation opportunities, as well as habitat for a variety of plants and animals. The Tennessee Department of Environment and Conservation (TDEC) has expressed an interest in the future development and management of a Greenway.

Tellico Landing

Please note The TVA board announced on March 15, 1999, that it would no longer consider the Tellico Landing proposal affecting TVA retained properties. This third alternative has, therefore, been eliminated from consideration in the DEIS.

The proposed project is located within 5 miles of the intersection of Interstate 40 and Interstate 75 near Lenoir City, Tennessee. The project area is owned by the Tennessee Valley Authority (TVA), the Tellico Reservoir Development Agency (TRDA), and private landowners. Tellico Landing is master planned as a commercial recreation/residential, mixed use, lake-front development which unites different hub activities through various historic themes. The proposed project contains 1761 acres (853 acres TVA; 217 acres TRDA; 691 acres private ownership).

Within the commercial recreation area, the proposal integrates through various historic themes: commercial retail shops, lodging, restaurants, water activities, entertainment, marina services, passive and active outdoor recreation, and a convention/exhibition center.

The historic theme would also apply to the mixed use area—commercial recreation/low density residential. This area would support an equestrian center, a golf training academy and cottages, two golf-courses, and single-family lots.

An additional mixed use area—commercial recreation/high density residential—includes one golf course, single family lots, apartments, an assisted living section, a health spa, a corporate retreat area, and rental areas. The commercial retail areas along Highway 321 may have any of the customary uses allowed under commercial zoning and may eventually contain office facilities for Tellico Landing. Residential condominiums would border a residential subdivision on one side and a commercial zoned tract on Highway 321.

Definitions:

BLM Bureau of Land Management: A government agency that manages public lands located primarily in the 12 western states.

EA Environmental Assessment: A formal report, under the National Environmental Policy Act (NEPA), used to document an environmental review of a federal action that normally concludes with a Finding of No Significant Impact (FONSI).

EIS Environmental Impact Statement: The most detailed report, under NEPA, used to document an environmental review of a federal action that normally concludes with a legal Record of Decision.

NPS The National Park Service: A bureau of the Department of the Interior that preserves the natural and cultural resources and values of the national park system.

USFS United States Forest Service: A federal agency that manages public lands in national forests.

TDEC Tennessee Department of Environment and Conservation: A state agency created to protect, preserve, and improve the quality of Tennessee's air, land, and water.

TRDA Tellico Reservoir Development Agency: An agency created by the Tennessee Legislature for the management and development of lands within the Tellico Reservoir project area.

TVA Tennessee Valley Authority: A federal government agency created to develop and operate the Tennessee River system to minimize flood damage, improve navigation, and provide energy and related products and services to residents and businesses in the multistate Tennessee Valley region.

TWRA Tennessee Wildlife Resources Agency: A state agency created for the preservation, conservation, and enhancement of Tennessee's fish and wildlife.

Appendix II

Comment Cards

Comments Received During the Public Review Period Beginning January 1999

Where does TRDA get their funding?

How much money does TRDA get from the sale of land for Tellico Landing?

Who pays for writing the EIS?

Who approves the final EIS?

What will TVA do to protect the increased bank erosion from substantially more boat traffic introduced to Tellico Lake by Tellico Landing? Large boats already cause severe erosion from large wakes.

What safety measures will be introduced to mitigate hazards from dense boat traffic on Tellico Lake?

What do you see as the influencing factors which would result in TRDA not selling any TRDA property for private use?

Why not move rental corporate retreat hubs closer to bridges and only build homes from Tomotley Cove to Mile Marker 7 or build a golf course along lake from silos to Mile Marker 7?

What safeguards will be taken to prevent TLI from causing lighting glare visible from the lake and from Tellico Village at night?

Will there be private docks on the lake or only the 417 docks marina?

Would TVA/TRDA accept "metal" commercial recreation (Ferris wheels) in the late negotiations with Tellico Landing if present plans change?

Will the roads be built prior to the approval of the TLI?

With the landings at full capacity, all homes sold, hotel full and all rentals rented, I hear total residents will exceed 5,000.

How will the addition of three more golf courses affect this water quality of Tellico Lake?

What effects have there been on the water quality due to Tellico Village and Rarity Bay golf courses?

How much will the boat traffic be increased on Tellico Lake?

Who are the investors financially backing this project?

Are any of the developers related to anyone that is part of TRDA/TVA?

How will this affect lake pollution noise?

Will there be regulations in place about pollution and noise? If so, what about enforcement?

Has TVA considered offering to sell its land back to the former owners, which it forcibly took the land from?

Given the fact that part of TVA's charter was to help the economic development of Tellico Reservoir area and TRDA was formed solely for the purpose of economic development of the Tellico Reservoir Land: What is the likelihood of stopping Tellico Landing? What is the likelihood of having some impact on what is included in the project?

What is the projected EIS timetable?

Why doesn't TVA keep the land, develop or open it up for public use, i.e., walking trails, boat launching area, etc.?

Keep the public land public and do not ruin the last lower lake public land.

In the current land use plan at the site for the TLI proposal is designated "cultural/public use/open space." Define the appropriate use of the land in this category.

Is there sufficient financing for a project this large?

Can the county afford financing of the infrastructure?

What prior experience have the developers had in residential and golf communities, and what financial backing will they commit?

With the two developers-who are the silent partners? Rumors are that the owner of the Calhoun chain of restaurants is one and another is George Miller (County Executive). If George Miller is not-does he own property in area of proposed development?

A major tourist attraction for downtown Knoxville was recently deemed not feasible after a feasibility study by a tourist attraction consultant. Has such a study been done for this project? What were the results?

Why would you turn our beautiful view into a Disney World? Greed. We moved to Tellico for the serenity and beautiful landscape and were promised that the land across the lake would never be built on.

Traffic will be a mess going over the dam towards Knoxville!

Who are the undisclosed developers?

Who is the major stockholder of this project or is there a major corporate stockholder, i.e., Disney Corporation or Dollywood?

What is meant by theme park? Please elaborate.

What experience do Clayton Pangle and Ed Loy have developing a project of this size? And where does the financial stability come from if they falter? Pangle has a poor prior track record much smaller than this. Who will pick up the shortfall?

What is the financial contingency plan if the "theme park" and "amphitheater" go broke?

Theme parks and outdoor theaters are experiencing flat or declining attendance across the nation. Remember Opryland?

What is the financial condition of Tellico Landing Inc.?

What makes Tellico Landing, Inc., think theme museums will be financially viable? I'm sure the Sequoia Museum is marginally profitable at best.

What is the current timetable for Tellico Land Development?

Who is the final authority making the decision on the sale of this TVA property?

If TVA decides to reject the TLI proposal for whatever reason after completing the EIS process, will TRDA abide by the public rejection of the project and not renew their option on the TRDA portion of the property?

Who approves the initial commercial business?

What is the approval process for second and third business if the initial business is not successful?

Tellico Lake Recreation Map edition of 1987 shows the TVA area as designated "cultural-public use- open areas." The Tellico Landing proposal will require a change in designation. Please comment.

Why did you give a local resident a place on the panel and not someone representing Tellico Village?

When I saw this crowd I knew there must be free food. I didn't know I'd have to wait so long. Is it almost over?

Do you plan to have a swimming pool or swimming beach?

Price per acre or total price? Terms? Any additional options? When and how many options were issued? How much was paid for options in advance?

Why is the high density residential upstream across from the yacht club?

Who are the stockholders of Tellico Landing?

How about a state park?

Are the current sewage and waste disposal systems adequate to process the volume produced by 500-700 homes, 20,000 seat amphitheater, 10 restaurants, 408 ship marina and dockotels, hotel convention center, campground, apartments, assisted living facility?

How much influence will it have if the majority of us disagree with your plan, and what alternative plan might be considered?

To developers: Have you solicited local, state or federal political support for your project? Do your investors include politicians or "prominent" people?

Referring to people who live "close" to the project, say within 5 miles, if 95-100 percent of those people were in opposition to your plan, would that have any effect on your plan?

Explain to us when TVA took this land years ago, what were your objectives and goals? I thought you were to preserve it for all and keep it as a natural resource.

Why, if TVA took the land and paid so little for it, can't it now dedicate the land to the state for a state park for use by all the public?

By the developers' own statement, they have been working with TRDA for seven years on this project. Given that history, isn't this already a "done-deal?" Is there a realistic opportunity to significantly modify or even derail this development?

Against overwhelming sentiment for TVA not selling land to developers, what factors would cause TVA to sell in opposition to sentiment? Is money one of the factors? How can TVA so easily change the master plan for Tellico Lake and sell public lands that were meant for everyone?

How does TVA plan to protect the lake environment? The 3rd alternative is very detrimental to the health of the lake environment.

Does the TVA have control of land below 820 line as they do on Tellico Village side?

Does the greenway proposed for Mile 7-20 of the right bank carry the "permanent" status of a park, or does it hold the land for a future developer?

Has the TVA ever established a policy or guideline for the percentage of land that should remain for public use? If not, do you foresee establishing such a policy?

If TVA's federal funding was not being reduced by Congress, would TVA still be eager to sell their lands to developers?

853 acres of the total project area now belongs to TVA-in addition to the 217 acres that TRDA owns. How are the 853 acres transferred to Tellico Landing? Part of the sale?

How can TVA possibly consider selling land that was taken for "the public good" initially, without the seller having a choice?

Now you "may" sell it at a huge profit?

This land was procured under duress and now sold at profit.

How do we contact Jennie to give support?

How will the Tellico Landing project "fit in" with the proposed Fort Loudoun State Park development?

I've heard that TRDA has already approved Tellico Landing. Is this true?

What is the current split of your 11,000 acres? Industrial, residential, and recreational? How much is uncommitted? Do you have a final target for each category?

Could the Nature Conservancy purchase any of that acreage, i.e., 217 acres to preserve it?

When and where was the public notice given before Tellico Landing purchased from TRDA the land at Jackson Bend that it now will develop regardless of the environmental study?

Why has TRDA so quickly endorsed and committed its land to Tellico Landing?

What is control process to "permit" new entrepreneurial hubs?

What is the TRDA position on this project? i.e., Feasibility? Financial capability of developer? Economic impact?

Having heard Ginny's comments and fact data about Loudon County's present status and growth plans, what are TVA/TRDA's and developers' rebuttal comment? Seems to be only financial.

TRDA did not answer the question on how much they will get for the 217 acres. Also, how much will TVA get for their land?

Once Tellico Landing acquires the land they want, what controls will exist to assure that they follow their original plan?

What are the financial guarantees?

Of what use to us is a feasibility study which embraced a "metal ride" park?

To what extent will Loudon planning, zoning, etc., on a county-wide basis influence the TLI project?

What assurances does TVA have that the developers are financially and organizationally capable of bringing this project to fruition? For example, what other projects have they successfully planned and implemented?

Will the homes to be built in this development be architecturally controlled?

Will there be restrictions on the amount of cars, trailers, boats in yards?

Is there a requirement for the writing of covenants? If yes, will they be written before approval? Who enforces the covenants?

What experience does Mr. Pangle or Mr. Loy have with land development? If so what is the name of that development and where is it?

To developers: Have either of you been involved in "failed" development projects?

What successful experience in development of similar size projects (and similar type use) can the Tellico Landing, Inc., group discuss and describe?

To TRDA: Why are there so many rental units in this plan and why a 20,000 seat music theater unit? Who will answer a loud noise level complaint? Disorderly conduct?

Will there be time shares sold? What will the "rental cabins" be in terms of size, materials, density per acre? Same for chalets and cottages?

What is Tellico Landing's definition of "lower density" and "higher density" residential?

Did not respond directly to question-"How much are the two developers going to commit in infrastructure?"

Why does the amphitheater have to be on the lake? Why not 2-3 miles inland? "Noise."

What price range will the homes be set at?

Will the developer pay for the cost of upgrading the surrounding roads and bridges because of this development?

Does the TVA recognize that some aspects of the project, specifically the 20,000-seat amphitheater and the huge marina, will be extremely detrimental to the character, peace and tranquillity of the lake?

Concerned about noise from music concerts. How will this be contained?

If this development will be designed to attract mass concerts, who will be expected to fund the necessary infrastructure estimated @ $100,000,000?

Have the developers completed a feasibility study? If so, are copies available?

What is the total estimated cost of TLI?

How much of the total cost have the developers committed to, and how much will they guarantee?

What will be done with the sewage? It cannot be pumped to Maryville (too far). It cannot be pumped to Lenoir City (across the river). Note spill in Knoxville last week when pipe broke. We do not want to live on a seeping sewage pool.

To developers: You mentioned the Boston Pops and a Broadway troop. Have you been in contact with the "Pops," a Broadway troop, or anyone who can see about their interest? Does your proposed amphitheater meet their needs?

What financial guarantees are there in place?

How can we know what is proposed will really be built?

After approval of the project, how can we assure that what was said will be done?

Why are questions only taken from the cards?

Have you or TRDA or TVA asked for a review of TLI concept by professional "tourist industry" consultants? If not, why not?

What will you charge for fishing permits inside Tellico Landing? Stone Mountain charges adults $5 and Children $3. How many paying visitors annually excluding lodging do you anticipate in ten years? Five years? At what entry fee per visitor?

Is there any plan to widen Highway 321 across Fort Loudoun Dam and the bridge that crosses the Tellico Reservoir where it feeds into Fort Loudoun Lake?

The Tellico Reservoir is very narrow for very much lake traffic, especially at the mouth (@ the bridge on 321). What about future barge traffic for the industrial park?

Maps provided @ both the Lenoir City meeting and the meeting tonight are of very poor quality. It is difficult for most, and impossible for me, to properly orient the Tellico Landing location without popular landmarks such as the dam, Tanasi Clubhouse, west shoreline, major Tellico Village neighborhood, public boat ramps, etc. Can a clear, concise map be provided? Please!!

To developer: Explain in detail what you mean as "willing seller." For example, the large tract at the end of Fisher Lane is not for sale (except for a ridiculous price). How can you present this as a likely inclusion in your project?

How much weight does noise pollution have on the environmental study: e.g., 20,000-seat amphitheater, movie studio access to theme areas, reenactments of historic events?

For Mr. Pangle: You stated that Tellico Landing will be accessible to those typically unable to enjoy Tellico Lake. This being the case, could the typical manufacturing worker from Tellico West, who makes $30,000 year, afford lake-front property at Tellico Landing?

Tellico Reservoir is already very crowded with boats, large ones which create big wakes and small (seadoos) which cause a hazard to all boating. What kind of controls will be put in place to ensure that the rental boaters will have some kind of training in "water rules of the road?"

The county does not adequately support the animal shelter and other local needs now, why would we think the new infrastructure needs would be met? What is the local sheriff's department participation and relationship to this development?

Pigeon Forge has amusement and entertainment centers within one hour of here. Why would we need to duplicate this here?

Why can't the beauty of this area and natural attraction serve as a tourist attraction?

What kind of concerts/events do you expect to attract to the amphitheater? How do you plan to keep the noise from coming across the lake?

Bringing in tourists will cause the need for more law enforcement. Who pays for that? More taxes? What about traffic increasing on 321 and our 411?

If, as Mr. Pangle says, "nothing has been decided," how can Mr. Pangle say "…when this project is completed?" This leaves concern and major doubts in people's minds.

Give us a three-minute summary on the history of International Harbor. TRDA sanctioned? How many acres? What happened?

How do you expect to attract sufficient convention business or theme park business to pay for this?

To Mr. Pangle: How are you connected with the Trail of Tears Commission? Do you know there is a "Trail of Tears" center at the Sequoia Birthplace Museum in Vonore? Have you contacted the Tribal Council of the Eastern Band of the Cherokee Indians?

I really don't have a problem with the development of a residential community on Tellico Landing. I do have a problem with theme parks, commercial development, and transit camping grounds. I don't think the plan as described is in the

best interest of Loudon County residences. You can't keep a theme park concept clean. Look at Branson, Missouri, Lake of the Ozarks, Pigeon Forge, etc.

The master plan was amended to the point it is worthless!!

Tellico Village commercial development is not terribly large or successful. What makes Tellico Landing think this will be successful?

Are there height restrictions as far as facilities, hotels, etc.?

Too many lakeside developments on Fort Loudoun Lake have gone bankrupt or almost in the past 15 years. What assurance do we have that won't happen here, leaving a mess?

Where do you think your audience will appear from to utilize your amusement area?

How many levels high will hotels be allowed to build? Will private docks be allowed by residences of the landings?

Why is history theme park being planned? It seems that area history is well covered by existing facilities and could be covered by simple reference and directions to existing areas.

Is Tellico Landing a public bid initiated development? If so, how many bids were submitted, and on what date were bids requested?

I personally would like to ask the TRDA why you do not create a National Park similar to Cades Cove which is free and open to all to enjoy? There, no one has to pay.

What was the original purchase price per acre of the land condemned? What will be the selling price per acre to these private developers?

What impact will this project have on the taxes of Loudon County and individual property owners? How much will this raise our taxes? What control will be enforced over the development? Who will be responsible?

I have heard that surveyor stakes for various areas are now being laid out. Is this true? If so, why? What does it mean?

Does the long-standing employment of Mrs. Pangle by TRDA present a conflict of interest ? Please explain?

How will selling price be determined? How will the four-lane highway of 321 widening be handled @ the dam? Traffic lights? What person makes the final decision? Who will be responsible for services and what guarantee will be required?

What guarantee is there that the developer will not just build the commercial aspects and not complete the residential?

Surveys consistently report 75-80 percent public opposition to development of public lands. County land use hearings attendees vehemently oppose the Tellico Landing type of project. Why isn't public opinion and preference given top priority? If this was the case, development would be a non-issue and environmental impact would be zero.

What are the criteria used in approving a project and its financial viability?

If questions are being raised regarding Knoxville's ability to support a 2000-seat convention center, what indicates a 20,000-seat amphitheater complex would succeed here?

If Tellico Landing gets the land for the full project, when does Tellico Landing have to pay TRDA? Is all of the land sold/transferred to Tellico Landing at the same time or can Tellico Landing drag out the closing to save funding?

Was Cooper Communities invited to bid on the TVA land? Were other developers? If not, why not? Why would TVA only consider one developer? If interested in selling land, open to all to bid.

If the developer defaults, who has responsibility for completion of the project?

For developers: It has been stated that Mr. Pangle has had problems in developing in his past. What was his problem in Ohio with the couple that lost and filed lawsuit against him? Where are the developers funds coming from?

How much do you intend to charge visitors to get on the property? Stone Mountain charges $6/car. Their six attractions each charge a fee—today about $20 per person. How much will you charge for such attractions?

You refer to a "master plan." Where can we read this and get more detail on Tellico Landing?

What actual steps can be taken to persuade TRDA/TVA to reject the development? What happens to current museums (Vonore) and future exhibits when they do not get attendance? The development may increase employment opportunities, but what about actual skill-higher wage positions? We don't need $7/hour jobs.

We currently have an excellent local Indian museum. An additional exhibit and a Scottish heritage golf course sounds like a token pay-off. Why isn't it?

What is the business, criminal, and financial background of the individual developers?

How can TRDA/TVA possibly consider this without understanding this will negatively impact pollution, traffic, crime, local beauty, infrastructure, and noise? It doesn't take an ecologist to realize the negative impact.

You speak of "hubs" of developers. Are you stating that all "hubs" and their financial ability must be in place before approval of development? If not, what guarantee of financial support and ability is there? In a condo association, if some units do not pay their condo fee, it endangers the entire stability of the condo development. What is the difference? If TVA had the mechanism to buy the land from the original owners, why isn't there a mechanism to do the same in reverse?

Why doesn't TRDA/TVA require all developers to post bonds with deadlines as Cooper Communities had to do and make all new developments pay for water, sewer, electric install and streets as we do in Tellico Village? We put in and maintain our own streets and road right-of-ways, with no cost to Loudon County.

Does anyone else have an option to buy the land? If the answer is no, why? I ask this because I want to know if it would be possible for Tellico residents to purchase this land?

How dare organizers to hand out drawings which are hardly readable. Is this an example of quality of total Tellico Landing project? Why an amphitheater? We have the UT with a stadium for this. Lots of noise over the lake. Why all this rental possibilities?

How do you justify a 20,000-seat performance stage on a quiet peaceful lake like Tellico? Certainly one of the more beautiful lakes in Tennessee.

With a 20,000-seat amphitheater, ten restaurants, a convention hotel, homes, condos, 418 slip marina, etc., my calculation amounts to about 11,000-12,000 cars between Fridays and Mondays. How can Highway 321 and Lenoir City handle the traffic?

Most of it will come that way and who will pay for the Highway 321 improvements on the lake, through the city to I-75? What about these costs? Who is addressing these very large issues? What is TRDA's response?

How does the marina proposal compare in number of slips and area compare to Ft. Loudoun Marina? Will international harbors be kept alive? Please define density as of lots/acre.

This EIS looks like window dressing. If it is not, why not? Your interest is obviously driven by the profit motive. What do you hope/expect to gain financially?

What number of people/year are estimated to visit Tellico Landing when it is operational? With a proposed 20,000-seat theater, how will this affect traffic safety over the dam since it is only two lanes? With over 400+ boat slips, what is being done to insure boating safety and maintain the beauty of the lake?

Before we purchased property at Tellico Village, we were told the land owned by TVA on the east side of the lake would never be developed! Why now? Can the policy be changed which currently does not allow some of the Tellico residents who have property in some of the coves that butts up against TRDA property from having permits approved for docks?

The land around Tellico Reservoir is already heavily developed with lakeside communities, marinas, and industrial parks. As these existing entities approach maturity, it seems that the water and land resources will be maxed out. Why put yet another project-a massive one-into play? Most of us feel that enough is enough. What does it take for you to reach that same conclusion?

With the existing traffic crunch on 321 from I-75E, why do we need an additional 10,000 vehicles a day? Why do we need an additional 300-500 boats and skidoos rented to further crowd our "at comfortable capacity" lake? Why, just why, do we need this "addition to congestion" and "diminishing of peace and quiet" that we moved to Tellico to obtain?

Tellico Landing states that King's Island had a positive effect on the area. I have relatives, long-term and pre-King's Island development, in Mason, Ohio, and have often witnessed what I am stating. Traffic is constant and impossible-noise is deafening-clutter and trash is never ending and plentiful by day visitors who just don't care, and there are fireworks every night the park is open.

This written card format is bulky and difficult for our residents. In fairness to having our voices heard in full volume instead of lumped together, and considering that the volume of comment that TVA receives is important to their (TVA's) decision on the sale of land for this proposal, please certify all the cards as being collected here and forward all of them to TVA.

Tellico Landing indicates that this development won't be another Dollywood. How can this not happen with additional developments adjacent to your project? If yours is successful, other opportunistic people will surely push for a greater expansion of tourist and commercial related money-making projects. You are initially planting the seeds for this.

Tellico Landing Developer: You express concern for people who do not have access to Tellico Lake because of financial position. There are public parks in Vonore, Lenoir City, and Knoxville that provide boat/jet ski access, picnic areas, camping facilities. Therefore your concern is not a valid one. Maybe you should consider the increased traffic and accidents that will occur on an already overcrowded lake.

Many of us have worked in cities all our life and bought land in the Village so we could enjoy the peacefulness of the lake and nature. Your development is taking this away.

The POA is on record supporting the greenway proposal of the east shore of Tellico Lake. This support was based on the understanding that this greenway would extend from roughly Mile 4.7, i.e., the south end of the Jackson Bend area zoned industrial, not Mile 7.0 as proposed by Tellico Landing. When did this change in shoreline development occur? This appears to be contrary to TVA's original planned use of this shoreline.

The school systems are already at capacity. A development like this will bring in a multitude of families. How will you plan to address this with the school systems financially? Building expansion, etc.

How do you plan to meet the increase in criminal justice needs?

I am concerned about potential safety on the lake if a large number of rental boats are generated from the new marina, without proper knowledge of the lake and general boat safety. What can be done to address this issue?

Who is going to patrol and maintain the water on the lake? We have two TWRA people for six counties now.

What is the boat density on the lake expected to be?

Noise pollution.

Safety.

What is the likely timing of making Highway 321 four-lanes from Route 1 to Route 95 as compared to Tellico Landing timing from start to finish?

How many cars will travel these roads? Could it be as high as 40,000 a day?

What will the impact on Loudon County schools and property taxes be?

Will the added boat traffic cause additional shore erosion?

Who will pay to tear down the amusement park when it goes broke?

Who will patrol lake for speeding and roughhousing?

Who is going to keep the waterfront and the lake clean?

Will you be widening 444 to bring traffic from Exit 72 on I-75?

How do you expect to handle the traffic over the two-lane dam bridge? What is proposed?

What is the cost impact to Loudon County and Lenoir City? Roads, schools, and utilities?

Who pays for the needed highway improvements?

Who controls the increase traffic on the lake and how is the new theater controlled as far as the lake is concerned?

The road system can't support this commercial development. What will be done to take care of this?

What plans are there being made to accommodate the additional traffic on 321—especially across the dam as the result of this development?

What will be done for traffic congestion? A bypass? Lenoir City? The bridge over the dam?

What steps will be taken to be prepare the local infrastructure, both on the lake and in the surrounding counties?

Where is the financing coming from to create and support this development? What assurance do we have to be sure this will not be a Pigeon Forge atmosphere?

What about traffic over Greer Bridge (bridge over the locks), won't this become a bottleneck?

How will the increase in traffic be handled with only a single-lane "dam bridge?"

With Tellico Lake as narrow across as it is, increasing boat traffic with 400+ boats will cause a hazard to boats.

How will traffic congestion be dealt with at the bridge over the dam going into Lenoir City?

321 four lanes merging to two lanes with Tellico Village traffic merging via a stop sign road?

Why are the additional bridge construction costs not discussed?

How will the added traffic impact current traffic flow on 444? Now two lanes, no stop lights. Will we need four lanes?

What are plans for traffic control if and when this development takes place?

How is it proposed to handle increased traffic on the 321 bottleneck from Hill junction to Highway 95 go toward Greenback?

Will they make the bridge over the dam four lane? How will they address traffic?

Are there any sewer lines planned? Sewer plant? Will all buildings be on septic system? Can that rocky land hold back septic tanks from the lake?

How will increased traffic from I-75 be handled?

Please show on the map the exact location of the amphitheater.

The entire project violates the natural scenic beauty of the area, is not environmentally sound, and adversely affects the general community. Please comment.

Why is this project based on TVA and TRDA lakefront property primarily? Why is more private land not being considered?

TRDA is a federal agency, as such who does its board answer to?

Guidelines for future compatibility with other hubs along with economic viability is a "blank check" for future development activities.

The Economic Viability test is a "blank check" for future/new hubs. Please comment.

Please show on the map the exact location of the marina.

For TVA/TRDA: If the roadway over Fort Loudoun Dam cannot reasonably handle the traffic created by TLI, will TLI be required to build a bridge across Tennessee River?

For TVA: If the same principle of using TVA land is applied to all TVA land on the lake, will any greenway or river corridor areas be left?

Congratulations to TLI for proposing to use land they do not own!

To POA: If TLI goes forward and Lenoir City or some other municipality proposes to annex TLI, can POA prevent them from also annexing part of Tellico Village?

According to studies done by Tennessee Department of Conservation and others, Tellico Lake has a very low oxygen content in water. How will this intense use affect oxygen level in lake?

For TLI: In reference to providing access to low income residents of area, what is the income level envisioned that is the minimum for buying property/homes/condominiums/apartments?

Where exactly are the 217 acres that TRDA is giving away to private developers for housing?

TVA: You did a survey just last year asking what future use people wanted for TVA land. Wasn't the conclusion that people wanted natural type development—trails, camping, picnic areas, etc.?

Land use dedications that are updated make it impossible to buy land and be guaranteed that what you buy "remains the same."

What is the life expectancy of TVA & TRDA in light of the elimination of federal government funds for nonpower TVA projects. This proposal appears to maximize revenue with little thought to long term effect on the environment.

Explain why TRDA is now obligated to sell the existing TRDA land to this particular group. Are you saying that this is a closed deal? If so, why?

In the process of granting rights on 217 acres, how many other bidders were involved? How many with a "tourist destination" track record. How did you market the bidding opportunity?

Where can we read the criteria by which bidders were evaluated?

TVA: Based on answer to the first question, would/could the green belt from 7 Mile up river be redesignated?

Mr. Hammontree: Who will be responsible for paying off TRDA development bonds sold for this project.

What will be the impact on local residents of Loudon County regarding the repayment of the development bonds?

TVA: Has TWRA ever been asked to manage or given land on any of Tellico Lake shoreline? If not, why?

When completed, who will own the 1700+ acres, and how will title be transferred?

What provision is there for expanding the bridge over the Fort Loudoun Dam?

Who determines which group would develop theme areas within the hub, and who oversees these decisions?

On what basis does TRDA support a developer or "master developer" who cannot fund the project?

What banker would lend money to such a proposal?

TLI: Which residential subdivisions in west Knoxville has Mr. Foz participated in?

Hubs? Define to us how many hubs and briefly describe each one.

Refer Ms. Tolbert's extremely well-professed comments…She now is experiencing the same laments as the Indians, the landowners, in the restructuring of this area for the "progress" of the area where "progress" and economics are concerned. TVA and TRDA seem to have no conscience.

As proven!!! Ms. Tolbert, we, the Indians, the early landowners, Tellico Village, "Feel your pain"…However, "progress" will progress, regardless!!!

How did the developers get an option on the 217 acres?

Isn't there supposed to be an open bidding process?

Were there others who bid on this land?

Does the TVA Board make the final decision on the final EIS, or is that decision made by the Council on Environmental Quality (CEQ)?

You say "TVA" is neither "pro" nor "con" re: Tellico Landing. Yet TRDA apparently has an agreement in place with TLI concerning 217 acres. Is it fair to say that TRDA is committed? How do we judge the positions of TRDA compared to the position of TVA.

Why does every piece of land have to be developed? How much will taxpayers have to shell out for someone's personal profit?

Why not keep this project below the 3.5 mile marker? Leaving TVA to keep public land from 3.5 Mile Marker to 7 Mile Marker.

What right does TVA have to do any selling or developing of land?

What rights do the people have who had this land taken from them?

You're talking about Tellico Landing. This involves only a few hundred acres. What about the remaining thousands of acres that are being rescoped? How will these be used?

The Tellico Landing project is a commercial development for the benefit of the developers.

It is not for the benefit of the people in Loudon County.

Why would TVA even consider this project? If it's not broken—don't fix it! Keep land natural!

APPENDIX A-2 Responses to Public Comments

Public Comments

Comments on the Draft Environmental Impact Statement - Tellico Reservoir Land Management Plan were received from March 17 through May 8. TVA received 36 sets of comments from individuals, government agencies, and organizations. Comments were received via letters, electronic mail (e-mail), telephone messages (1-800-TVA-LAND), and petitions.

All comments have been summarized and categorized for easier public review. Because comments were summarized, the exact wording was not always used. It should not be assumed that all individuals identified with combined comments necessarily support all facets of that comment. TVA attempted to retain important differences among comments when summarizing or combining them. However, a number of summarized comments may still be somewhat repetitious because further refinements could have distorted an important element of a specific comment. In some instances, individuals submitted multiple comments and were identified with more than one category.

Public Comment Categories & Number of Comments

	Category	# of comments		Category	# of comments
1.	Bakers Creek-Wear Bend	11	16.	NEPA Issues	4
2.	Coytee Springs Recreational Area	1	17.	Plan A	1
3.	Crime/Safety	4	18.	Plan B	3
4.	Cultural	2	19.	Planning Process	7
5.	Development Issues	11	20.	Private Water Use Facilities	1
6.	Eastern Band Cherokee Development	9	21.	Recreation	11
7.	Erosion	1	22.	Residential	4
8.	Greenway	7	23.	River Corridor	1
9.	Industrial Development	3	24.	SMI	2
10.	Infrastructure	2	25.	Socio-Economic	1
11.	Jackson Bend	1	26.	TRDA	2
12.	Land Plan/Scoping	9	27.	Transportation	2
13.	Land Transfers	3	28.	TVA	1
14	Natural Resource Management Activities	7	29.	Zone 3, 4	1
15.	Natural/Sensitive Resources	6			

Responses to Public Comments

1. Bakers Creek-Wear Bend Area

1.1 **Comment:** We are for the proposed plan if there is a possibility this area would be zoned residential.

Comment by: Mary McMahan

1.2 **Comment:** We have just bought our home in the town of Greenback and one of the reasons is because of the boat dock, and being able to go fishing around the banks down at Bakers Creek, and even swimming, going horse boat riding and skiing and horse back riding is available for the area down here to enjoy. Please don't ruin this area by letting this go residential or industrial.

Comment by: Betty Gurley

1.3 **Comment:** We urge you to consider that this area be zoned for recreation or residential development. The labor market in the area is tight and future labor demand will only make the problem worst. Additionally, the industrial park unoccupied land in the area should be sufficient for future expansion.

Comment by: Lou Padgett

1.4 **Comment:** To whom it may concern. I would like the area of Bakers Creek to be a recreation area/park and NOT a industrial park. Thank you.

Comment by: Cledia Banton

1.5 **Comment:** In order to maintain the beauty and natural resources of the area, which create a lifestyle that attracts people and development, we need to now preserve these resources to keep the area attractive to those who seek them. It is now time to start protecting the remaining open land for public use prior to it disappearing forever.

Comment by: James & Nancy Aquavia

1.6 **Comment:** This is in response to the sign posted in Greenback, TN post office regarding the proposed Tellico Reservoir Land Management Plan for the Bakers Creek/Wear Bend area. Whoever created the flyers is against the plan because there would be no more hunting, horseback riding, hiking, or biking in that area. We are for the proposed plan if there is a possibility it would be zoned residential.

Comment by: Mary McMahan

1.7 **Comment:** I strongly oppose development of any kind to this area along Tellico Lake.

Comment by: Doug McLemore

1.8 **Comment:** I do not want the are of Bakers Creek to be used for industry or residential. The people who have always lived here have had enough taken from them and I do not believe you have the right to use land that was forced from its owners for private use.

Comment by: Shirley M. Brown

1.9 **Comment:** Regarding the proposed Tellico Reservoir Land Management Plan for the Bakers Creek/Wear Bend Area; if the land around the area is not used as Residential, then Industrial would be better than Recreation Area/Park. Area people would benefit

from the extra jobs that would be created. Most of the businesses in Vonore keep their area clean and well groomed so what's wrong with a business if it will bring a bigger payroll to the area.

Comment by: Mary McMahan

1.10 **Comment:** Leave this Bakers Creek/Wear Bend Area as a recreational park area.

Comment by: Sandra Lovingood

TVA Response: *The above comments (1.1 through 1-10) result from a flyer that was placed in the Greenback Post Office advising the area citizens that TVA and TRDA were reallocating the Wear Bend Peninsula to Industrial Use and all recreation activities (hiking, hunting, horseback riding, dog training, etc.) would no longer be allowed. Neither TVA nor TRDA was responsible for the flyer, and neither agency has proposed a change in land use for the Bakers Creek-Wear Bend area.*

The Wear Bend (Morganton) Peninsula was conveyed to TRDA for industrial purposes and as with all non-TVA lands, is not included in TVA's proposed land use allocations. The recreational uses of the area listed above are occurring on an interim basis, in accord with an agreement between the Tennessee Wildlife Resources Agency and TRDA.

1.11 **Comment:** We want to go on record that we oppose development of the referenced area (Morganton Cemetery/Wears Bend Area) to industrial uses. We understand that this proposed use has been in place for years, however we feel the circumstances attending the decision to zone this land as industrial are no longer applicable. Since the improvement of 411, the area has seen significant development and more private land is becoming available for development along this corridor. The economic circumstances prevailing at the time the Tellico River area was developed have changed significantly and private money is now available to continue the economic development in this area. The entire rationale for the TVA to foster economic development in this river basin area needs to be reexamined, since the area is now capable of continued economic development solely within the private sector.

Comment by: James & Nancy Aquavia

TVA Response: *The land in the Morganton Peninsula/Wear Bend area was transferred to the Tellico Reservoir Development Agency to be managed for industrial development (see FEIS Section 2.2.1 and Exhibits 1 and 2). TRDA considers requests for industrial development based on the merits of the proposal, demand, and site suitability. Off-reservoir properties may be more suitable for some industries. To change the designation of this area from industrial to some other category (e.g., residential), TRDA would have to propose this change to TVA for approval . To date, TRDA has not requested this change.*

2. Coytee Springs Recreational Area

2.1 **Comment:** I would support this land use provided: 1) no loud noise, loud speakers, paid amusements, loud music, or rental power boats are permitted; 2) the park's organized activities are terminated at 10 p.m. prevailing local time each day and not begun again until after 7 a.m. the next day, except that over night camping could be permitted; 3) all

bright lights be extinguished at that time, I have no objection to camp fires or low level lighting as may be needed for safety, emergency, rest rooms, etc. at night; 4) use of alcoholic beverages need not be prohibited but be limited to moderate consumption; 5) at least one full time management employee is present on the site at all times it is open between April 15 and October 15 each year.

Comment by: Charles P. Furney, Jr.

TVA Response: *Comment noted. As proposed under Alternative B (p. 13 of FEIS), recreation development on this tract (Parcel 10) would be for day use only.*

3. Crime/Safety

3.1 **Comment:** At present, TVA has no lake patrol to enforce the various laws relative to its use. Neither the local, state or county governments or the US Coast Guard patrol Tellico Lake. Theft of boats and gasoline, stripping boats of valuable materials, such as electronic equipment, motors, etc. takes place every year, especially during the boating season.

Comment by: Charles P. Furney, Jr.

3.2 **Comment:** I would love to be able to go back to the Wear and McCall homeplaces and look around, but I am afraid due to so many people who go back there for no good reason other than to drink, and some probably have drugs. It would not be safe for one or two individuals to hike into that area alone.

Comment by: **Mary** McMahan

3.3 **Comment:** TVA created Tellico Lake. Therefore, I think they have a responsibility to manage it, which includes policing it.

Comment by: Charles P. Furney, Jr.

3.4 **Comment:** This area is a small county area and it is quiet now; you start bringing big companies in and new houses and you will see crime.

Comment by: Greenback Citizen

TVA Response: *(Comments 3.1 through 3.4) There are a number of agencies that share the responsibility for patrolling the public waterways and lands of the Tellico Reservoir. TVA Police patrol the area by boat during peak use times and are available on short notice in emergency situations. Local law enforcement agencies, as well as the Tennessee Wildlife Resources Agency, also patrol the area by boat and land. To report an unlawful or dangerous situation call your local law enforcement agency or the TVA Police (865-632-3631 or 1-800-824-3861).*

4. Cultural

4.1 **Comment:** How many man-days were expended in searches for archaeological features? Why was so much land not searched?

Comment by: Edward E. C. Clebsch, Ph.D

TVA Response: *The recent survey conducted by the University of Tennessee involved 92 days of fieldwork and the crew consisted of 8-10 individuals per day. As described in FEIS Section 3.2, the archaeological survey was concentrated on those tracts with the highest potential for development. See also the response to Comment 4.2.*

4.2 **Comment:** Pursuant to your request received by this office on Thursday, March 9, 2000, this office has reviewed documentation concerning the above-referenced undertaking. This review is a requirement of Section 106 of the national Historic Preservation Act for compliance by participating federal agency or applicant for federal assistance. Procedures for implementing Section 106 of the Act are codified at 36 CFR 800 (RIN3010-AA04: June 17, 1999). Considering available information, we find, after applying the Criteria of adverse Effect codified at 36 CFR 800, that the project as currently proposed will ADVERSELY AFFECT PROPERTIES THAT ARE ELIGIBLE FOR LISTING IN THE NATIONAL REGISTER OF HISTORIC PLACES. Therefore, this office has an objection to the implementation of this project. You should now, through TVA, inform the Advisory Council on Historic Preservation of this adverse effect determination and begin immediate consultation with our office. Please enclose a copy of this determination in your notification to the council as delineated at 36 CFR Part 800. Until you have received a final comment on this project from this office and the Council, you have not completed the Section 106 review process. Please direct questions and comments to Joe Garrison (615) 532-1559. We appreciate your cooperation.

Comment by: Herbert L. Harper; Tennessee Historical Commission

TVA Response: *Pursuant to 36 CFR § 800.6(b)(1)(iv), a Memorandum of Agreement (MOA) has been executed between TVA, the Tennessee State Historic Preservation Office, and the appropriate Indian tribes, to minimize and address any effects to historic properties eligible for listing in the National Register of Historic Places. A copy of this MOA is included in the FEIS.*

5. Development Issues

5.1 **Comment:** The one thing not needed is further development on Tellico. It is the only stretch of water essentially "unmanned" in the immediate vicinity.

Comment by: Quent Byerley

TVA Response: *Comment noted.*

5.2 **Comment:** Developing upper Tellico will only undo a prime piece of God's creation. More boats, more traffic, more activity that undoes the very nature we want to enjoy. Who profits from the development? Certainly the developers. Who suffers? the users and appreciators of the only semi-undeveloped accessible water in the area. It seems that a select few will make money at the expense of the rest.

Comment by: Quent Byerley

TVA Response: *Of the 4,031acres of plannable land upstream of Highway 411, only 286 acres is proposed for new development under Alternative B. Of the 286 acres, 139 acres would be available for recreational use. In addition, the land use of about 71 acres*

(part of Parcel 79) would be changed from Industrial Development to Natural Resource Conservation.

5.3 **Comment:** Please leave some undeveloped land in Loudon County. Let these people build their projects somewhere else.

Comment by: John Houston

TVA Response: *Comment noted.*

5.4 **Comment:** I fully agree with the decision to drop the Tellico Landing proposal from the EIS. Sale of additional public land to private developers is not in the public interest.

Comment by: Wayne W. Tolbert

TVA Response: *Comment noted.*

5.5 **Comment:** Greenback needs more growth, as long as it is legitimate businesses and good restrictions are set for the prospective businesses.

Comment by: Mary McMahan

TVA Response: *Comment noted.*

5.6 **Comment:** You took all that land from farmers and such to build the lake and now you are trying to make millions off of it.

Comment by: Greenback Citizen

TVA Response: *Comment noted. A very small percentage of plannable lands are being allocated to development (Zones 5, 6, or 7). Most of the plannable lands are being allocated to Zones 3 and 4.*

5.7 **Comment:** Let's keep the development more nature and people friendly.

Comment by: Nancy and Charles Johnson

TVA Response: *Comment noted.*

5.8 **Comment:** In regard to the DEIS, the majority, if not all, of the proposed changes will encourage more development on the shorelines of Tellico.

Comment by: Fegan & Dana Kenny

TVA Response: *Alternative B would zone more of the reservoir shoreline for uses where shoreline development would not occur than would Alternative A (the present plan). In addition, the Alternative B River Corridor along the upper Tellico River would result in lower levels of shoreline development than would likely occur under Alternative A. (Appendix B1)*

5.9 **Comment:** Do not completely develop the West side of the reservoir. Coordinate with Loudon and Monroe Counties to consider the extreme potential development and look at opportunities to have controlled development and preserve some of out farm/forest lands look at how the secondary development will impact the entire Tellico Reservoir.

Comment by: Peter Schoepke

TVA Response: *During this review process, planning agencies within Loudon and Monroe Counties were invited to offer their comments. With the exception of the proposed Eastern Band Cherokee Site (Parcel 94) and three proposed public recreation sites (Parcels 95, 130 and 139), no new development is proposed under either alternative on the west side of the reservoir.*

5.10 **Comment:** I feel that land along the lake is being developed at too fast a rate as it is. The number one attraction to this area, 5 years ago, to me was the lack of development and I was told there would be large tracts of land left to be green belt areas.

Comment by: Doug McLemore

TVA Response: *Comment noted.*

5.11 **Comment:** Development Proposals - We agree with the TVA Board of Director's disapproval of the Tellico Landing, Inc. proposal for development of TVA property due to the public's voiced disapproval and the risk of environmental impact to the reservoir.

Comment by: Heinz J. Mueller, United States Environmental Protection Agency

TVA Response: *Comment noted.*

6. Eastern Band Cherokee Development

6.1 **Comment:** The Cherokee Recreation Area is a bad idea. This site will be highly visible not only from Hwy. 411, but also from the state park and even the nearby mountains. Doesn't seem like a real plus for the aesthetics or even the needs of the area. I haven't been able to think of any plusses for this idea as far as the region is concerned.

Comment by: Meredith Clebsch

TVA Response: *The Cherokees have expressed an interest in the potential use of Parcel 94 to build overnight accommodations, a restaurant and transient boat docking to provide access to the restaurant by lake users. This would likely be more attractive than the abandoned, kudzu-covered old highway that exists there now. This area is not visible from the developed facilities in the State Park. Any possible view from the "nearby mountains" would appear as distant background where features are not distinguishable.*

6.2 **Comment:** I am concerned about the inlet to the Tellico Area Services System (TASS) public water supply located on or near Parcel #61. Indian truces, in general, have treaty rights which may prevent TVA from controlling the use of this land, once it is assigned to an Indian tribe. I would consider it very serious if this public water supply was somehow contaminated. I think TVA should investigate very carefully, the legal ramifications of assigning this property to an Indian tribe, to insure that it is not used in a way that might be detrimental to this water supply.

Comment by: Charles P. Furney, Jr.

6.3 **Comment:** I am unalterably opposed to giving the Eastern Band of the Cherokee Indians control of the 38 acre tract of TVA land (parcel 94) located in Vonore between Hwy. 411 and the Tellico River or any other tract of land on any TVA reservoir for the purpose of

developing either public or commercial recreation. In my opinion, the purpose of this proposal by the Cherokees is to develop a gambling operation in Tennessee.

Comment by: Ray Payne

6.4 **Comment:** My support of the land use change/sale/lease to the Eastern Band of the Cherokee Indians is conditioned on the desire not to have a casino built in the area. I therefore request that TVA, as part of any deal with the EBCI, get a written agreement that the EBCI or their agents would never petition any party for a gaming license for use on any part of this property or on private property to which this property adjoins.

Comment by: Wayne W. Tolbert

TVA Response: *(Comments 6.2 through 6.4) If Parcel 94 is made available to the Eastern Band Cherokee Indian development as proposed under Alternative B, it would not become part of an Indian Reservation. The EBCI would lease land held in fee by TVA and would be subject to all environmental and other regulations and laws including those associated with water quality and gambling.*

6.5 **Comment:** The Cherokee recreation idea is just plain unacceptable.

Comment by: Meredith Clebsch

TVA Response: *Comment noted.*

6.6 **Comment:** I support the proposed land use change that would allow the Eastern Band of the Cherokee Indians (EBCI) to develop a 38-tract, in part to help support the museum. Cherokee and Native American culture is an integral part of the history of the Tennessee Valley and deserves support.

Comment by: Wayne W. Tolbert

TVA Response: *Comment noted.*

6.7 **Comment:** Making the museum financially independent or improving other Cherokee sites via development at the expense of the pristine beauty to Tellico and the surrounding area is a backward move.

Comment by: Quent Byerley

TVA Response: *Comment noted.*

6.8 **Comment:** We also note the four notional or actually proposed recreational development projects that were listed on page 11 and are to be considered for Alternative B or A: 1) Eastern Band of the Cherokee Indians Development, 2) Greenway, 3) Coytee Springs Recreational Area, and 4) River Corridor. Of these, EPA prefers recreational developments that foster conservation and aesthetic appreciation exemplified by preservation/development of greenways (linear parks), riverine riparian areas, picnic areas and other recreational areas in natural settings along reservoir/river corridors and other selected nearby sites. We prefer these as opposed to other recreational developments such as hotels and restaurants. We therefore find the Greenway, Coytee Springs and River Corridor proposals more so appropriate than the Cherokee Indians Development proposal. While the Cherokee Indian proposal should be considered due to their special governmental status and the fact that use of some of the project revenues would be for

their Sequoyah Birthplace Museum, the need for such a project in this area should be closely reviewed (i.e., how many such amenities already exist relative to the number of expected recreators) as well as the proposal's potential for development impacts, which should not notably diminish the aesthetic value of the reservoir lands being visited by the recreators.

Comment by: Heinz J. Mueller, United States Environmental Protection Agency

TVA Response: *Comment noted. The highest justification for the Tellico Reservoir project in 1967 was recreation which accounted for 38% of the potential project benefits. The proposed recreation allocations in Alternative B seek to create a balance between the public's desire for more recreation amenities, existing uses, and anticipated population growth patterns which could influence the recreation use of TVA land. Potential aesthetic impacts have been considered in the proposed tract allocations and will be further considered once a development proposal is received. See the response to Comment 6.1.*

6.9 **Comment:** With regard to the proposal by The Eastern Band of the Cherokee Indians Development, the League opposes the use of TVA held public lands for the proposed uses outlined in the Draft Plan.

Comment by: Marty Marina, Tennessee Conservation League

TVA Response: *Comment noted. See the response to Comment 19.1.*

7. Erosion

7.1 **Comment:** The present concerns I have are the immediate erosion caused by unprotected development sites and increased boat and recreational traffic. This increased pressure has eroded several banks and peninsulas that I used to fish. In addition, the increased sediment build-up in the creek channels has virtually left no water during the winter draw down. TVA should stringently enforce areas of runoff into the Tellico Reservoir. This should be done with the coordinated efforts of local county governments and TRDA.

Comment by: Peter Schoepke

TVA Response: *In recent years, TVA and cooperators have worked to stabilize critically and severely eroding reservoir shoreline sites where there are public amenities (e.g., in the vicinity of boat ramps, day use areas, and other public use sites). TVA Cooperative Shoreline Stabilization Project activities apply innovative, cost-effective, and environmentally-sound treatments that stress both structural (rip rap) or structural in combination with bioengineering (planting of appropriate vegetation). TVA assessed shoreline erosion conditions on Tellico in 1995 and since then has conducted four projects on Tellico that have stabilized 5,600 feet (1,706 m) of shoreline. TVA may also make shoreline stabilization a condition of granting a permit for various uses of TVA property by individuals, developers, or municipalities. Designation of extensive reaches of shoreline for protection under Zones 3 and 4 should allow maintenance of a forested shoreline on much of those shorelines, and future growth of trees and shrubs on other shorelines as natural succession continues. TVA addresses erosion on tributary streams by entering into partnerships with private landowners, local governments, and other*

interested parties to improve stewardship on private lands and other non-TVA lands through the use of Best Management Practices (BMPs) on agricultural and non-agricultural lands, establishment of vegetated streamside riparian zones, and improvement of instream aquatic habitats.

8. Greenway

8.1 **Comment:** I support this land use and encourage its implementation.

Comment by: Charles P. Furney, Jr.

TVA Response: *Comment noted.*

8.2 **Comment:** My major concern is the so-called "Greenway" it will become a "Trashway" and will negate any protective efforts planned for Zones 3 and 4.

Comment by: Chris McBride

TVA Response: *Public agencies incur daily risks for abuse of land they manage and TVA land is no exception. However, the presence of TVA or other public agency staff often can reduce potential abuse. By attracting responsible recreation users for walking, hiking, biking, and horseback riding, coupled with a commitment to management by the concerned agency, abuse of public land can be minimized.*

8.3 **Comment:** The greenway is not yet well defined. It could be a good idea or a bad idea depending on just who manages it and how the ideas shake out. As long as we continue to be involved in this process, it might be a good idea, then again, I would like it to be minimal impact, preferable only walking and certainly nothing motorized. I'd like to see a plan to enhance the habitats to reflect as near original landscape as possible. I would not like any developed parks, but only composting toilets at a few sites and well considered picnic tables at a very few sites.

Comment by: Meredith Clebsch

8.4 **Comment:** The proposed greenway is not well-defined and would require, although not mentioned, the taking (some would say stealing) of more private land. There are numerous parcels of private land that are mere feet away form the 813' water mark. Has any actual survey been done by walking this property rather than depending on poorly developed and outdated maps? The state is talking of closing several state parks including Fort Loudon due to funding shortages, so who is going to fund the development and upkeep of a greenway?

Comment by: Fegan and Dana Kenny

TVA Response: *(Comments 8.3 and 8.4) The concept of the greenway was presented to TVA by the Tennessee Department of Environment and Conservation. TDEC is an appropriate public agency to pursue ultimate development and management of a greenway, or other public agencies like TVA or local governments could be involved. Although Alternative B shows a broad area with greenway potential, the entire length of the area does not have to be utilized nor does it all have to be done at the same time. The plan provides the opportunity for the greenway to happen. Although a potential route has been looked at conceptually, no specific plan is in place. The concept is to ultimately*

designate a corridor route on public land, with a buffer width which is appropriate for suitable recreation uses. Supporting parking/access nodes at select intervals could also be a component. It is possible that parallel trails to accommodate horses and pedestrians could be developed, however, public use of motorized vehicles would not be acceptable. The 100-foot greenway width mentioned in Section 2.2.2 is for conceptual purposes only. In some areas, because of the available public land base, the greenway would be narrower.

8.5 **Comment:** The proposed Greenway does not give the necessary space for any significant wildlife population or forests.

Comment by: Peter Schoepke

TVA Response: *Although Alternative B shows a broad area with greenway potential, the greenway would encompass only a small portion of the 1000-acre area where the greenway route is proposed. The remaining land would continue to be utilized for natural resource conservation and sensitive resource management purposes.*

8.6 **Comment:** I support the concept of a greenway corridor from the recently sold TRDA property on Jackson Bend toward Vonore. The proposed development of some parks and day use areas along this side of the lake is needed. I would like to see horseback riding, hiking, and mountain bike use allowed in the narrow corridor with the remainder left in a natural state, except for parks and day use areas.

Comment by: Wayne W. Tolbert

TVA Response: *Comment noted.*

8.7 **Comment:** The installation of access points, parking lots, restrooms, and picnic areas will lead to the destruction of the Zone 3 and 4 land for wildlife and plant protection.

Comment by: Chris McBride

TVA Response: *Although Alternative B shows a broad area with greenway potential, the greenway should encompass only a small portion of the 1000-acre area where the greenway route is proposed. The remaining land would continue to be utilized for natural resource conservation and sensitive resource management purposes. Potential access points have been identified in the land allocation process which minimize direct impacts to sensitive plants, animals or cultural resources and are near existing or proposed roads. (See also response to comment 8.5)*

9. Industrial Development

9.1 **Comment:** TRDA has a 2000+ tract of land that is still zoned industrial between 411 and 321. This land is the last remaining large tract of undeveloped land in the Tellico Reservoir.

Comment by: Peter Schoepke

TVA Response: *The tract in question is the Wear Bend Peninsula, which is under the custody of TRDA and no longer belongs to TVA. Because TVA does not own this property, it is not included in either the Alternative A or the Alternative B allocations. See also the response to Comments 1.1 through 1.10.*

9.2 **Comment:** Industrial/Commercial Development Zone - We believe that most industrial and some commercial development would be incompatible land use for the Tellico Reservoir lands. An example of such development that may be acceptable if properly managed is an office park. Development forms that are less environmentally acceptable are barge terminals and industrial access due to their potential for water quality degradation. Barge terminals used for whole log or wood chip conveyance would have an additional impact due to the land clearing activities that would precede the barge loading, particularly if such clearing occurred on the Tellico Reservoir lands.

Comment by: Heinz J. Mueller, United States Environmental Protection Agency

TVA Response: *Under Alternative B, TVA would change the allocation for about 71 acres (part of Parcel 79) previously designated for Industrial Use to Natural Resource Conservation. With the exception of an 18 acre tract proposed for a water treatment plant expansion, all of the other land allocated for industrial use is in narrow strips fronting non-TVA land already designated for industrial use. Outstanding industrial access rights already exist on these tracts. Further TVA review would be required for industries to exercise these access rights; these reviews would consider the direct, indirect, and cumulative impacts of the proposals. See FEIS Section 3.4.2 and the response to Comments 14.1 through 14.6 for information on natural resource management activities on TVA lands.*

9.3 **Comment:** In light of the transfer of 11,151 acres to the TRDA, the League feels that these proposed lands [allocated for industrial/commercial] should be re-evaluated in terms of their suitability and need as industrial and commercial development sites.

Comment by: Marty Marina, Tennessee Conservation League

TVA Response: *The 11,151 acres of land under the custody of TRDA do not belong to TVA and are therefore not part of the Alternative A or Alternative B land use plans. See also the response to Comment 9.2.*

10. Infrastructure

10.1 **Comment:** How about schools? New residences mean more children. The schools in Loudon County are busting at the seams now. Will TVA or the developers build more? I think not. This burden will fall on the taxpayers.

Comment by: John Houston

TVA Response: *Under either alternative, there would be new residences built in areas around the reservoir. However, neither alternative allocates additional TVA land for residential development. The anticipated changes in school age populations are the same under the two alternatives.*

10.2 **Comment:** We own 70 acres next to Jackson Bend proposed land. We own two trailer parks and a RV park. I want to know where this road is going to be and how it will affect my property.

Comment by: Albert Bell

TVA Response: *This issue involves a potential development on private property that is in the neighborhood of the Lower Jackson Bend commercial recreation site. Although this TRDA development would likely require TVA approval of water use facilities, TVA has not received a request for such approval. Because detailed development plans for the Lower Jackson Bend area are not available, TVA cannot describe the effects of any associated roads on your property.*

11. Jackson Bend

11.1 **Comment:** My property is directly opposite a large island designated as part of Parcel #24. Locally this island is known as Jackson Bend Island. It is classed as Zone 3-Sensitive Resource Management, which appears to me to be a wise decision.

Comment by: Charles P. Furney, Jr.

TVA Response: *Comment noted.*

12. Land Plan/Scoping

12.1 **Comment:** I appreciate that TVA is attempting to develop a reasonable plan of land uses that will benefit the public without adverse effects on those of us who live near or on the lake.

Comment by: Charles P. Furney, Jr.

TVA Response: *Comment noted.*

12.2 **Comment:** This is a sincere attempt to do something to preserve and protect what remains of the natural aspect of the area included in the study.

Comment by: Mikki Boyatt

TVA Response: *Comment noted.*

12.3 **Comment:** TVA is to be commended for following the NEPA process in an open and clear manner. Public scoping and discussion of the Tellico Landing proposal with follow-up surveys was an excellent example of proactively seeking and using public input to agency actions. The public was and is involved as Congress intended under the statute in my opinion. The public meeting on the DEIS was organized in a workshop format so that a person could focus on issues and questions/ areas of concern.

Comment by: Wayne W. Tolbert

TVA Response: *Comment noted.*

12.4 **Comment:** The map on page 2, showing TVA retained land, would lead the uninitiated to believe that the agency is retaining ALL of the reservoir shoreline, and then some. The map is grossly misleading.

Comment by: Edward E. C. Clebsch, Ph.D

TVA Response: *Figure 1.1-1, FEIS page 2, is intended to show the Tellico Reservoir area and TVA owned lands. With the exception of an area immediately below Chilhowee Dam, TVA retains ownership of the entire shoreline above the msl.*

12.5 **Comment:** The two maps included in the DEIS are difficult to read because some colors and patterns are so similar as to be almost undecipherable. I hope that will be corrected in further editions.

Comment by: Edward E. C. Clebsch, Ph.D

12.6 **Comment:** The color coded maps display the very large areas already given over to Tellico Village and the left bank residential. These maps could have been more clearly drawn to make this look less awesome

Comment by: Robert Lowery

TVA Response*: (Comments 12.5 and 12.6) The Exhibit 1 and 2 Maps have been revised in the FEIS and the final land plan. The maps, when read in conjunction with the parcel descriptions, clarifies any ambiguities caused by the colors and patterns used in the maps.*

12.7 **Comment:** A few things in the large book would have been good to have in the public summary: Table 2.4-1, and none of the comparison of alternative discussion pp. 21-23. Also, the definitions in Table Z are now only relevant to Alt. A, and even though Table 2.4-1 is helpful, there is still no clear conversion format. Some of the acreage in Table 2 for Alt. A (p.10) are just hard to trace acres to Alt. B, and people find this suspicious. Some of you can't stay with the same land use categories forever, and those used for Alt. B seem more straightforward. But its just hard to look at a detailed planning document and have the fact that two different land use classifications were used for Alt. A and Alt. B jump out at you. Meanwhile, the overall impression of the plan, both Alt. A and Alt. B is that we are fighting a losing recognized retreat… But the reality is there, so where do we go from here?

Comment by: Robert Lowery

TVA Response: *It is impractical to include all this detail in the summary. It is available in the full Final Environmental Impact Statement and Land Plan.*

12.8 **Comment:** The public comment section is good and some parts of it should go into the public summary document. Meanwhile, there is no indication of contact with organizations such as environmental groups and civic groups. I assume TVA has an organized approach to civic and neighborhood groups in the TVA region, and these provide ready made focus groups. These results would serve to show TVA's links to communities, and inputs could be developed to more coherent levels than the comment card fragments.

Comment by: Robert Lowery

TVA Response: *TVA solicited comments from individuals as well as a broad range of civic, environmental, and neighborhood groups during scoping and following the release of the DEIS. A list of recipients of the Draft plan and EIS is included in FEIS section 4.6.*

12.9 **Comment:** The East Tennessee Development District has completed its review of the above mentioned proposal, in its role as a regional clearinghouse to review state and federally-assisted projects. The ETDD review of this proposal has found no conflicts with the plans or programs of the district or other agencies in the region. However, ETDD or other reviewing agencies may wish to comment further at a later time.

Comment by: Robert E. Freeman, East Tennessee Development District

TVA Response: *Comment noted.*

13. Land Transfers

13.1 **Comment:** If anyone has the right to despoil the area for profit, let it be the Cherokee descendants of those who were robbed in the first place. The next group with the logical right to the area would be the farmers who were displaced and whose right to profit was unjustly denied.

Comment by: Mikki Boyatt

13.2 **Comment:** Could we please have a moratorium on transferring TVA owned land to shadow agencies, Saudi Arabian developers, and miscellaneous single countries?

Comment by: Robert Lowery

TVA Response : *Comments 13.1 and 13.2 noted*

13.3 **Comment:** Regarding the commitments made in the EIS, I would urge TVA to clearly state that no additional land would be transferred or sold to TRDA. While I would agree under some circumstances that trading parcels may be in the public interest, further sales or outright transfers are not, and TVA should state this publicly in the EIS.

Comment by: Wayne W. Tolbert

TVA Response: *Comment noted. No land is proposed to be transferred to TRDA under either alternative.*

14. Natural Resources Management Activities

14.1 **Comment:** Increasing access to the resources, particularly the water, does not seem to be in the best interest of the resource. I see any further development of most of these areas as a negative, except for necessary upkeep I regard natural resources as the priority for management, with human needs as secondary. The old intelligent tinkering concept comes to mind regularly when thinking about how to prioritize our shrinking natural resources. There seems to be considerable leeway in a number of the Zone designations for continued development or timber harvesting and this is a major concern. Focus energies on upgrading the landscape instead of degrading it.

Comment by: Meredith Clebsch

14.2 **Comment:** I propose that all zone 3 and 4 lands be 100 percent protected against all encroachments to include forbidding even forestry management, which is a nice term for clear cutting hardwoods and replanting non-native pines. Zone 3 and 4 lands should be preserved lands, vehemently guarded to any encroachment other than hikers (foot access only).

Comment by: Chris McBride

14.3 **Comment:** Timber harvesting is allowed in Zone 4. This is not necessarily all negative, but why not consider a restoration plan, which would encourage natural hardwood stands and the associated increased diversity instead of continued pine rotations and their sterile conditions? Manage for older growth? Is it more valuable as a functioning forest or as pulpwood and flooring? I'd vote for a long term more natural system.

Comment by: Meredith Clebsch

14.4 **Comment:** Natural Resources Conservation Zone Definition - The TVA categories for the upgraded Plan under Alternative B appear reasonable overall. However, we are concerned about certain aspects of the definition of the "Natural Resources Conservation" zone. This category is to provide "enhancement of natural resources for human use and appreciation" and focus on "management of resources." It includes land management for wildlife areas, shoreline conservation areas, river corridor areas, islands of 10 acres or less, and so forth. Activities are to include "hunting, timber harvesting, wildlife observation, and camping on undeveloped sites." While we agree with most of these objectives, we do not concur that timber harvesting should be part of a conservation land use zone and to not believe it would foster "human use and appreciation," since timber harvesting may actually be counterproductive to human appreciation. We suggest that this management objective be eliminated since it is incompatible land use for the circumferential reservoir lands and islands and would likely increase the risk of erosion and sedimentation of the reservoir. At a minimum, timber harvesting should be culled into a separate zone that might be titled the "resource management" or "harvesting" zone, and be kept to a minimum acreage (particularly since other zones such as industrial/commercial development and residential access would already involve land clearing and erosion potential). If timber harvesting is allowed, the amount of acreage proposed for timber harvesting and the proposed harvest methodology should also be documented in the FEIS.

Comment by: Heinz J. Mueller, United States Environmental Protection Agency (EPA)

14.5 **Comment:** The Zone 4 designation (Natural Resource Conservation) allows, among other things, timber harvest. Potentially, 55% of ALL of the Tellico Reservoir lands could have their timber harvested. I presume that 'timber harvest' includes clear-cutting. I would like to enter into the record a request that any proposed change in land activity in Zone 4 lands be publicly aired and that I be informed personally of those proposals.

Comment by: Edward E. C. Clebsch, Ph.D

14.6 **Comment:** There are a number of positive changes in Plan B for sensitive species, which is wonderful. I'm also concerned for the many other non-sensitive species. Many of our more common plants and animals like box turtles, warblers, salamanders, butterflies and woodland wildflowers, are easily wiped out in certain management schemes, particularly timber harvesting. I consider these non-threatened species equally important for

protection lest they become threatened. At any rate, I miss them when they're gone. I would like to see reduced disturbances to habitats for these more common residents and even enhancements such as native plantings to encourage them back into degraded areas.

Comment by: Meredith Clebsch

TVA Response: *(Comments 14.1through 14.6) Land use Zone 4, Natural Resource Conservation, is defined in FEIS Section 2.2.2 as land to be managed for the "enhancement of natural resources for human use and appreciation." As stated in FEIS Section 3.4.2 Environmental Consequences for Terrestrial Ecology, Alternative B discussion, any future timber harvesting or forest management activities would be for the purpose of maintaining or enhancing present levels of ecological diversity. Future management activities, including forest management, would be planned and implemented through a natural resources management planning process for specific tracts, or aggregates of tracts (i.e., management units). This planning process would tier off the FEIS and would rely on input received from peer agencies and the public to ensure that future management activities are scientifically valid, and consistent with the needs and values of TVA's stakeholders.*

If forest management is judged to be an acceptable strategy for use in maintaining or enhancing present levels of ecological diversity and for addressing the needs of TVA's public lands stakeholders, Best Management Practices (BMP's) would be applied as necessary to minimize the potential for soil erosion. In addition, appropriate width buffers, particularly in areas proximal to roads, the reservoir shoreline, and other thoroughfares would be protected.

14.7 **Comment:** The proposed updated Plan should be somewhat modified to eliminate or minimize timber harvesting of the circumferential reservoir lands and islands and to eliminate incompatible forms of commercial and industrial development of the TVA Tellico Reservoir lands. Instead, the Plan should maximize conservation of these lands to promote/maintain water quality and foster the recreational appreciation value of these lands through preservation/development of greenways, riverine riparian areas, picnic areas, landings, and other recreational areas in natural settings located along reservoir/river corridors and other selected nearby sites.

Comment by: Heinz J. Mueller, United States Environmental Protection Agency (EPA)

TVA Response: *Comment noted.*

15. Natural/Sensitive Resources

15.1 **Comment:** It is my belief that the more area designated as Sensitive Resource Management, the better. I mean better for the plants, animals, and the recreational user. It might cramp the plans of certain speculators who could benefit personally and monetarily from continued natural habitat destruction.

Comment by: Mikki Boyatt

TVA Response: *Comment noted.*

15.2 **Comment:** One need only look at the destruction occurring in the Smokies. The trails and other access areas will be littered with trash, will be trampled by people, and will be abandoned by the wildlife. While I support your designation of specific land used to control development, I am opposed to any development of Greenways. The public access afforded by Greenways will only accelerate the destruction of the natural land.

Comment by: Chris McBride

TVA Response: *Comment noted.*

15.3 **Comment:** I am concerned about habitat protection, especially the river bottom dwellers or benthic community as defined in the report. It is obviously in trouble. Any society is judged by its weakest link. This is the reservoir's weakest link and it is a basic one in the aquatic food chain. To be ignorant of these conditions is one thing, but to do nothing in a drastic way to improve them is negligent. Until this basic environment is improved, all the water quality is in trouble.

Comment by: Mikki Boyatt

TVA Response: *As explained in the EIS, the likely causes of the poor benthic community in Tellico are not associated with decisions related to the uses of TVA lands on the reservoir. Tellico's cold, nutrient and mineral-poor inflow is unlike the inflow of other run-of-river reservoirs to which Tellico is compared for analysis. In fact, poor benthic communities are common in TVA tributary reservoirs because of oxygen depletion in deep waters caused at least partly by natural decomposition processes (similar processes likely occur in deeper waters which become trapped in the Tellico forebay). Although the benthic community in deeper reservoir areas is generally considered poor, there are apparently adequate benthic animals in shallower areas to support fish in those areas. The overall fish species diversity in Tellico Reservoir is relatively good.*

As described in FEIS Sections 3.7.2 and 3.8.2, the proposed land use allocations would likely result in more opportunities to protect and enhance water quality and the aquatic community, especially in shoreline areas. TVA also has other ongoing programs to improve water quality in the reservoir area; see the response to Comment 7.1.

15.4 **Comment:** Looks like the shorelines associated with Industrial/Commercial lands, Zone 5, are managed as Zone 5 in Plan B. That seems to allow these areas less protection than in the past. Whereas the Zone 5 areas are the least protected in terms of natural resources, wouldn't they benefit most from at least shoreline habitat protection? What advantages would this new designation allow industries? Taking land out of protection seems contrary to other resource protection goals.

Comment by: Meredith Clebsch

TVA Response: *The TVA lands fronting Industrial/Commercial properties reflect the outstanding rights of and commitments to the backlying property owners and are designated accordingly. The rights of the backlying owners would not change under either alternative. With few exceptions, this land is still available for use by the general public. (See also response to comment 92.)*

15.5 **Comment:** I would like to see the 2,200 plus acres of land rezoned specifically for wildlife (natural). If we desire to provide any significant area for sportsman or naturalist around the main reservoir, this is the only land remaining.

Comment by: Peter Schoepke

TVA Response: *The property in question, in the Bakers Creek-Wear Bend area, was conveyed to TRDA and as all non-TVA lands, is not being planned under either alternative. See the response to Comments 1.1 - 1.10.*

15.6 **Comment:** What man-day effort was expended in field searches for plants? For animals?

Comment by: Edward E. C. Clebsch, Ph.D

TVA Response: *About 35 person days were spent on plant and animal surveys in support of this plan and EIS. Individual tracts were first examined using aerial photographs and then via boat to eliminate areas having poor potential for rare species, such as those tracts dominated by extensive fescue fields. Field surveys were then performed during spring and summer months on specific tracts potentially having habitat for rare organisms. During our field surveys several new populations of state-listed plants and animals were identified, as well as rare or uncommon communities such as canebrake and cave habitats. Survey information from previous studies of Tellico Reservoir was also considered.*

16. NEPA Issues

16.1 **Comment:** We note that only two alternatives were presented. Alternative A (no action) and Alternative B (proposed allocation action alternative). Although not inconsistent with NEPA, more than one action alternative would have been preferable for an EIS document. As such, we recommend that TVA be flexible in modifying its allocation alternative in response to public comments.

Comment by: Heinz J. Mueller, United States Environmental Protection Agency (EPA)

TVA Response: *As explained in FEIS Section 2.3, during the development of the DEIS TVA considered another action alternative. In response to public comments, this alternative was rejected. Public comments have been a major factor in the development of Alternative B, the allocation alternative. In response to public comments, the proposed use of Parcel 23 has been changed from Recreation to Natural Resources Conservation.*

16.2 **Comment:** Comments Due Date - It should be noted that the due date for public comments listed on the abstract page of the DEIS as April 24, 2000, is not consistent with the EPA due date (May 1, 2000) based on when the DEIS was officially filed with EPA in Washington, DC and listed in the Federal Register. We therefore recommend that the comment period remain open until May 1, 2000, and comments will be officially received by TVA until at least that time.

Comment by: Heinz J. Mueller, United States Environmental Protection Agency (EPA)

TVA Response: *TVA assumed that EPA would publish the Notice of Availability in the Federal Register on March 10, 2000, and the April 24, 2000 due date published in the DEIS was based on that assumption. The Notice of Availability was published on March 17, 2000. TVA received comments through May 8, 2000*.

16.3 Comment: Sale of or change in use of private land near the Tellico Reservoir for residential, commercial, or industrial purposes carries with it impacts on use of TVA lands and the reservoir itself. Every extension of TASS waterlines silently encourages further development and the conversion of farmland to other uses. The DEIS does not address those higher order, cumulative, regional impacts on Tellico Reservoir and its environment. I think it should, and would like to know why it hasn't. In short, this DEIS is written 'close to the facts' and is not adequate in its scope of time or of geography.

Comment by: Edward E. C. Clebsch, Ph.D

TVA Response: *TVA acknowledges that much of the privately owned land in the vicinity of Tellico Reservoir, as well as the TRDA lands, will eventually be developed for residential, commercial, or industrial purposes, and that this development may result in environmental impacts. The impacts of this likely development were a consideration in TVA's planning process. Of the 12,643 acres of TVA land being planned, only 505 acres (4% of the total planned acreage) of previously uncommited land are, under Alternative B, being proposed for development. Through its recently adopted Shoreline Management Policy, TVA has taken steps to reduce the cumulative impacts of residential shoreline development on the Tellico Reservoir and surrounding lands.*

16.4 Comment: NEPA, under which this document was developed, states (to the best I can remember) that the purpose of the act is to improve and enhance the environment. I do not find that issue addressed in the DEIS.

Comment by: Edward E. C. Clebsch, Ph.D

TVA Response: *The purpose of the National Environmental Policy Act, as defined in Section 2 [42 USC § 4321] is, among other things, "to declare a national policy which will encourage productive and enjoyable harmony between man and his environment," and "to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man." In addition to setting a national environmental policy, NEPA requires federal agencies to follow certain procedures when taking actions affecting the environment. This EIS has been prepared to satisfy the procedural requirements of NEPA. TVA also believes that its proposed action is in accord with the purpose of NEPA.*

17. Plan A

17.1 Comment: We are strongly for alternative A which calls for no action.

Comment by: Fegan and Dana Kenny

TVA Response: *Comment noted. Both alternatives will be given equal consideration by TVA when making the selection.*

18. Plan B

18.1 **Comment:** It is my opinion that of the two plans, B is better than A, but that it continues to leave too much area vulnerable to major habitat destruction.

Comment by: Mikki Boyatt

TVA Response: *Comment noted.*

18.2 **Comment:** Overall, there seem to be a number of improvements as far as natural resource protection is concerned in Plan B.

Comment by: Meredith Clebsch

TVA Response: *Comment noted.*

18.3 **Comment:** Of the two alternatives presented, I strongly learn toward Alternative B, but with significant reservations.

Comment by: Edward E. C. Clebsch, Ph.D

TVA Response: *Comment noted.*

19. Planning Process

19.1 **Comment:** EPA strongly recommends that the overall objective of the updated Plan be one that emphasizes conservation, water quality, habitat preservation and compatible land use planning of the Tellico Reservoir lands. This is important for two main reasons: 1) the TVA Tellico reservoir is susceptible to soil erosion/sedimentation and other nonpoint- and point-source impacts associated with development of its circumferential lands and islands, and 2) the objective of the former TVA lands conveyed to the TRDA (11,151 acres of unplannable lands that are now part of the Tellico Project) is to "use the acquired lands that surround the reservoir in a way that would permit the project to make the maximum possible contribution to the economy of the region" (page 2). While such maximum economic contributions need not have unacceptable environmental consequences since environmental regulations such as Section 404 of the Clean Water Act would still apply, such an economic goal could result in implementation of various forms of commercial and industrial development, timber harvesting, land grubbing and clearing, and related activities for a portion of or the majority of these lands, which in turn could result in a measure of environmental degradation to the reservoir. Accordingly, the proper management of those retained lands still under direct TVA purview (6, 103 acres) becomes even more important given that these conveyed lands are no longer under TVA purview (or are under only limited TVA purview due to any residual link for being former federal lands and any environmental language in the TVA-TRDA conveyance contract No. TV-60000A). Such management should emphasize

overall compatible land use planning in order to minimize potential additional environmental impacts to the reservoir that may result from prospective development of the conveyed lands.

Comment by: Heinz J. Mueller, United States Environmental Protection Agency (EPA)

TVA Response: *Comment noted. Every permit request for use of TVA property or for construction of water use facilities is reviewed by environmental specialists. One of the Reservoir Land Planning objectives is, as stated in the Land Management Plan, to "Assure the plan maintains and provides opportunities for the continued enhancement of the quality of life afforded by the natural setting and recreational amenities on and along Tellico Reservoir." TVA believes that its proposed land use allocations meet this objective as well as the other planning objectives.*

19.2 **Comment:** Alternative B (TVA Proposed Action) - Zone Percentages - We recommend that in addition to the acreages provided for each zone of the updated Plan for Alternative B (page 16), the percent of total land for each zone should also be provided in the FEIS (as they were documented for Alternative A, page 10). Based on our calculations, those percentages approximate the following: Project Operations (5.0%), Sensitive Resource Management (17.3%), Natural Resource Conservation (55.3%), Industrial/Commercial Development (2.6%), Recreation (15.4%), and Residential Access (4.4%).

Comment by: Heinz J. Mueller, United States Environmental Protection Agency (EPA)

TVA Response: *This change has been made in the FEIS.*

19.3 **Comment:** TVA has attempted to capture many of the concerns expressed by the Tennessee Conservation League in the past. We applaud this effort. However, in light of the disposition of 11,151 acres to the TRDA, the League believes that some adjustments to this Draft Plan, specifically Alternative B, are warranted. The League would like to discuss these concerns and others regarding TRDA, with TVA at your convenience.

Comment by: Marty Marina, Tennessee Conservation League

TVA Response: *Comment noted. A meeting with Mike Butler and Marty Marina of TCL to discuss their comments on the draft plan took place May 19. The following letter describes the results of this meeting.*

June 2, 2000

Ms. Marty Marina
Executive Director
Tennessee Conservation League
300 Orlando Avenue
Nashville, Tennessee 37209-3200

Dear Ms. Marina:

Thank you for the opportunity to meet with you and Mike Butler in Cookeville on May 19. The meeting was very productive and positive from our perspective. Summarized below are brief responses to some of the issues that were raised in your May 5 letter to Steve Akers and discussed in our meeting.

Public Recreation Projects

The proposed recreation projects noted in the draft Environmental Impact Statement have not been formalized and will be individually reviewed under the NEPA process when formal requests are developed.

The Eastern Band of the Cherokees development concept has been supported by TVA since 1990 and has the potential to provide substantial public benefits. If approved, a portion of commercial revenues generated would be used to support the Sequoyah Birthplace Museum, and a substandard public access site would be replaced by an improved public reservoir access facility. This proposal will also receive full environmental review, including public involvement, at the time a formal request is submitted by the Eastern Band. Your suggestions to integrate educational conservation themes in the museum's activities, keep the boat access area free to public use, and use environmentally sensitive design concepts have been noted.

The majority of the public land associated with the proposed greenway and river corridor is recommended for natural resource conservation (Zone 4) or sensitive resource management (Zone 3). We do not feel it is appropriate to lump all recreation project acreage into Zone 4, since the purpose of the land use plan is to provide for future uses and needs. For the general public to be properly informed, these development concepts need to be addressed in the plan, rather than waiting to a later date when they are formally proposed.

We will review the Zone 6 (Recreation) parcel descriptions to ensure the final plan clearly states the kinds of recreation uses (formal, informal, commercial, etc.) that could be considered on a given parcel of land. Also, since our meeting, we have reevaluated the allocation of parcel 23 (the tract adjacent to Lotterdale Cove campground). As a result of your comments and those of others we received during the public review period, we plan to designate this parcel as Zone 4 (Natural Resource Conservation) in the final plan.

Residential Access Proposed Allocations

The residential development category (Zone 7) does not allow residential use or dwellings to be constructed on TVA property. These areas are public shoreline zones where requests for private water use facilities from adjacent private property owners can be considered. These shoreline areas are available for public use, but any approved dock facilities are considered private. There are no additional areas or acreage proposed for Zone 7 beyond those that already exist. These Zone 7 areas were classified as TVA-Owned Residential Access Shoreland during the development of the Shoreline Management Policy. The map reflects current conditions which are driven by outstanding deeded access rights and TVA's contract with TRDA.

Continued on next page

Ms Marty Marina letter continued:

Proposed Recreation Allocations

We concur that strong stakeholder support continues for the protection of public lands, but there is also strong support for additional quality public access facilities, trails, and greenways. As you are fully aware, TVA's mission is multipurpose in nature. Therefore, we work to balance a diverse and sometimes conflicting set of objectives and stakeholder needs in the management of lands and reservoirs. About 274 additional acres are proposed for this category in the draft plan (Alternative B). Except for 90 acres in parcels 7, 49, and 71 (marginal strip shoreline) and parcel 94 (Eastern Band development) proposed for commercial recreation development, the balance of TVA land in Zone 6 - Recreation (1,853 acres) is proposed for public recreational use. TVA's past experience has shown that inadequate reservoir access and sanitary facilities, as well as unmanaged informal use, result in resource abuse and environmental degradation. We feel it is important to inform the public and avoid piece-mealing the review of future projects and proposals. Again, any future proposals will be fully reviewed under NEPA and evaluated for feasibility.

Industrial/Commercial Development Proposed Allocations

The 11,151 acres of land under the custody of TRDA do not belong to TVA, and the review of this property is outside the scope of the land use plan. Issues in regard to TRDA can best be addressed with the TRDA Board. Tellico Reservoir was created to provide a host of benefits, including residential and industrial development. TRDA was created and lands transferred to that agency to ensure that these objectives are fully realized.

In summary, an extensive effort has been made to develop land management plans for TVA lands on Tellico Reservoir that provide balanced and multipurpose public benefits. Of the 12,642.8 acres considered under the plan, a total of 11,034 acres is recommended for allocations under sensitive resource management (2,184.5 acres), natural resource conservation (6,996.4 acres) and public (noncommercial) recreation (1,853.3 acres).

We appreciate the strong interest shown by the League in Tellico Reservoir concerning future use and protection of TVA public land. Please call me at (865) 632-6373 if you have additional questions or need further information on this or any subject of interest.

Sincerely,

Eric W. Rauch
Regional Manager
Resource Stewardship
Mideast Region

19.4 **Comment:** In general, the League believes that creating exceptions for individual recreation projects within the Tellico Reservoir Land Management Plan is unwise, and could unintentionally benefit one user group at the expense of another. We believe the Tellico Plan should be developed and finalized, and then these projects proposed and approved or denied upon their individual merits. Thus, the League is opposed to listing these projects within the Tellico Reservoir Land Management Plan EIS. Specifically, we are concerned that some of the proposals have not been formalized. Their listing within this document could mislead the public that these projects have been approved.

Additionally, without details, the League is wary to endorse any public recreation project. We recommend that all lands contained within The Eastern Band of the Cherokee Indians Development, the TDEC Greenway concept, the Coytee Springs Recreation Area, and River Corridor concept be placed in a natural resource conservation designation. Future proposals concerning these projects can be brought up individually, and at later dates when more details are specific. Additionally, the environmental impacts of such projects have not and cannot be adequately addressed in the Draft Tellico Reservoir Land Management Plan. Lastly, we are concerned that "lumping" these proposals together could possibly impact the need for cumulative impacts assessments and other natural resource assessments.

Comment by: Marty Marina, Tennessee Conservation League

TVA Response: *Comment noted. The proposed Reservoir Land Management Plan determines how the TVA land would be used for the foreseeable future. Therefore, because the four recreation proposals listed in your comment are foreseeable, TVA is proposing zoning that would accommodate them. The potential individual and cumulative impacts of these proposals are analyzed in the EIS to the extent that they are foreseeable. TVA believes that these proposed developments can occur in a manner that would not result in significant negative environmental impacts. Once TVA receives formal proposals for these developments, TVA will conduct any necessary additional environmental reviews, and the results of these reviews will be available to the public. Following the review of formal proposals, TVA will either approve or deny the proposals based on their individual merits.*

Much of the land within the proposed River Corridor is available for the construction of private water-use facilities based on existing landrights. The River Corridor proposal would provide a higher level of protection of natural resources, and accommodate a higher level of compatible public use, than would otherwise occur under TVA's Shoreline Management Policy. The only proposed recreation development within the River Corridor, an access site on a 3 acre tract, was endorsed by TCL on April 6, 2000. In addition, the great majority of the land within both the Greenway and River Corridor areas is allocated to either Sensitive Resource Management or Natural Resource Conservation.

19.5 **Comment:** There is enough discussion of the relationship between TVA and TRDA that it seems reasonable to raise questions about a few details. If TVA did sell TRDA 11,151 acres, what was the price? If indebtedness was incurred by TRDA, has any of that debt been repaid? What was the interest rate on the debt? How have the funds obtained by TRDA for the sale of land been used? How much has come back to TVA? What has been the disposition of those funds? Further concerning TRDA, is there a provision in the relationship with TVA by which lands can be returned to TVA without paying the current market price for residential or industrial lands?

Comment by: Edward E. C. Clebsch, Ph.D

TVA Response: *These financial questions are beyond the scope of this land planning process and should be addressed directly to the Little Tennessee Watershed Team and/or TRDA. There is no provision in Contract No. TV-60000A that addresses the return of land from TRDA to TVA.*

19.6 **Comment:** There is so much emphasis in so many places in the document dealing with the rights of backlying land owners to have access privileges (albeit with leases) to the shoreline and privileges to build private docks that it is easy to become suspicious that something fishy is going on. I would like to see a map which shows all current boat docks on the reservoir and which shows, by contrast, a boat dock in every place that one could be allowed. Similar maps showing access leases would be similarly instructive. I further suggest that the original plan for the reservoir be reviewed and that the contrasts between the original 'contract' with the citizenry and the current plan be made explicit.

Comment by: Edward E. C. Clebsch, Ph.D

TVA Response: *The inclusion in this EIS of maps showing all private docks is impractical. The differences between the Contract No. TV-60000A land plan (Alternative A) and the proposed land plan (Alternative B) are described in Section 2.4 and elsewhere in the FEIS.*

19.7 **Comment:** The primary concern that the Tennessee Wildlife Resources Agency has with Tellico Reservoir Management planning is with the tenure of the easement this agency has with TVA. At present, we have short-term revocable licensing agreements with TVA at our Tellico Lake Wildlife Management Area (WMA). We would prefer long-term easements. At a recent meeting with TVA staff, we were advised that, when the subject Plan is finalized, TWRA would need to present a long-term management plan for the WMA in order to facilitate consideration for long-term easements. If this is still the case, we would appreciate notification of the end of the environmental Impact Statement process so we can present our long-range planning to TVA. Please advise us if this approach should be varied

Comment by: Dan Sherry, Tennessee Wildlife Resources Agency

TVA Response: *Once TVA's Board of Directors has selected an alternative, TVA staff will notify TWRA so that long term tenure options for the wildlife management areas can be explored. The proposed land plan does not change any licensing agreements with TWRA.*

20. Private Water Use Facilities

20.1 **Comment:** I'm disgusted by the already ridiculous number of private water use facilities which only serve the few and not the public. This should never have been allowed and it should be more difficult, not easier, for individuals to access what I consider public lands.

Comment by: Meredith Clebsch

TVA Response: *Comment noted.*

21. Recreation

21.1 **Comment:** Changes to Recreation status from C/PU/OS Reallocation of about 388 acres from C/PU/OS to Recreation. 38 acres to Cherokees, 140 remaining acres to Commercial Recreation for which there are no formal proposals, and 211 acres to Public Recreation.

This recreation status worries me since it looks like it would be easy to develop these areas without much public notice. Who will decide how these areas are developed?

Comment by: Meredith Clebsch

21.2 **Comment:** Both, Parcel 10 (Coytee) and Parcel 23 (Lotterdale Campground) are designated "Cultural/Public Use/Open Space" in the current plan. This commercial recreation designation allows for marinas, boat docks, resorts, campgrounds, and golf course

Comment by: Meredith Clebsch

TVA Response: *(Comments 21.1 and 21.2) Parcels proposed for future recreation use under Alternative B have a Zone 6 allocation, with the exception of the Greenway Corridor. The tract descriptions have been revised to more specifically define the allowable recreational uses of each tract. This proposed plan establishes the conditions under which these tracts could be developed. Specific development proposals will be reviewed under NEPA and public notification will occur consistent with TVA's Resource Stewardship land use guidelines.*

21.3 **Comment:** This is a narrow lake that is already overcrowded.

Comment by: Fegan & Dana Kenny

TVA Response: *TVA considered allocating additional land for marinas and boating access. However, due to the public's expressed concern and TVA staff's knowledge that boating use is heavy on Tellico Reservoir, additional marinas were not proposed. The new boating access areas proposed under Alternative B are in parts of the reservoir where access is limited. Existing allocations would allow consideration of requests for marinas in Bat Creek and Lower Jackson Bend which are both controlled by TRDA. Regulation of water craft and their operation is the responsibility of the Tennessee Wildlife Resources Agency.*

21.4 **Comment:** It's a shame that developers can come in and buy TVA property and the land owners in and stop all the fishing. This land once belonged to the Indians and was given to us for enjoyment, to fish, hunt, and relax.

Comment by: Sharon Seay

TVA Response: *Comment noted.*

21.5 **Comment:** There are not any docks accessible to older people to use for fishing.

Comment by: Sharon Seay

TVA Response: *Fishing facilities are available at Tellico Canal, 441 bridge, and the Lotterdale Cove and Toqua recreation areas. The Tellico Canal facility meets Americans with Disability Act accessibility specifications.*

21.6 **Comment:** We have been led to believe that a new proposed Tellico Reservoir Management Plan for Bakers Creek/Wear Bend area from the old Morgantown Cemetery to Highway 411 is zoned/slated for industrial development. We urge you to consider that this area be zoned for recreation or residential development; the possibility of Tennessee state part closures in the area makes a case for recreational zoning.

Comment by: Lou Padgett

TVA Response: *Comment noted. See also the response to Comments 1.1-1.10.*

21.7 **Comment:** Under Goals and Objectives (page 130), one goal includes "meet public needs for recreation activities." Should this be revised to reflect carrying capacity issues? Is meeting all recreationists needs possible or desirable? TVA avoids this question since you do not manage the water itself, I think TWRA has that responsibility?

Comment by: Meredith Clebsch

TVA Response: *The broad goal was established to reflect the variety of potential recreation needs identified through the planning process through which TVA land could or should be utilized to help meet future recreation needs. Thus, the carrying capacity of existing facilities was considered in recommending land allocations. No new marinas are proposed by TVA, and the proposed new access areas are in parts of the reservoir where access is presently limited.*

21.8 **Comment:** We request that TVA place the 1,943.6 acres of land into natural resource conservation designation. This designation will not preclude TVA from entertaining recreational proposals in the future, and this designation will protect these lands from ill-thought or politically motivated proposals. Lastly, this change in designation will better TVA's ability to measure the merits of proposals based upon their individual benefits and costs.

Comment by: Marty Marina, Tennessee Conservation League

TVA Response: *Of the 1,803.5 acres proposed to be allocated to Zone 6 - Recreation under Alternative B, 1,529.1 acres are already recreation areas and TVA is not proposing to change this use. Of the uncommitted 414.5 acres, 170 acres are part of either the Eastern Band of the Cherokee Indians, Greenway, or Coytee Springs Recreation Area concepts, and 15.1 acres would be used for two access sites on the Tellico River. See the response to Comment 19.5 for more discussion of these allocations. The remaining uncommitted tracts allocated to Zone 6 are adjacent to existing recreation areas and none of them contain natural resources that would be significantly impacted by the proposed use. TVA will assess the individual merits of the recreation proposals by conducting appropriate NEPA reviews at the time a specific proposal is submitted to the agency for approval.*

21.9 **Comment:** In the greenway proposal, we are asked to accept a plan totally lacking in detail. It is analagous to our being asked to accept the general plan of TLI, Inc. in the January 1999 public meeting. Further, are not the recreational development proposals in parcels 8 and 10 not antithetical to the greenway concept? Still further, why should the greenway be stopped at the Lower Jackson Bend Commercial Recreation site (parcel 7) when it could be extended through that parcel and through the natural resource conservation and sensitive resource management lands to the north to make the greenway longer and more accommodating.

Comment by: Edward E. C. Clebsch, Ph.D

TVA Response: *Parcels 8 and 10 are viewed as potential components of the greenway and as stand-alone public recreation areas which could develop independently of the*

greenway. The two parcels can serve as access nodes for the greenway and they can each meet future public recreation needs. The greenway was stopped at Parcel 8 because this is a logical break point between public and commercial uses, and it minimizes impacts to Tract No. 4.

21.10 Comment: It is difficult to accept that TVA, having acquired the land, constructed the dam, created the reservoir, engineered the creation of a state agency to perform land sales (from which TVA is prohibited in the 1933 TVA Act), and held marginal lands, now dismisses concerns about overuse of the water body as being in the domain of TWRA and not in its own. TVA has prided itself on its catalytic roles, and I suggest that it should reach out to agencies like TWRA and not just to the regulatory agencies that it must pay attention to like USACE and USFWS and the Tennessee Water Pollution Control agency.

Comment by: Edward E. C. Clebsch, Ph.D

TVA Response: *Comment noted.*

21.11 Comment: The document encourages, in a wide variety of ways, increased use of its lands and TRDA's lands while failing to address the issue of carrying capacity of the subject lands and waters for recreation pursuits, for commercial purposes, for residential development, or for industrial development. To be sure, the land use plan is a guideline for only 20 years, but I am concerned that carrying capacity for some uses may well be exceeded within that time.

Comment by: Edward E. C. Clebsch, Ph.D

TVA Response: *TVA considered allocating additional land for marinas and boating access in Alternative B. However, due to the public's expressed concern and TVA staff's knowledge that boating use is heavy on Tellico Reservoir, additional marinas were not proposed and new boating access was provided only in limited areas of the reservoir where access is limited. Shoreline strips fronting residential, commercial, or industrial tracts already have existing water use rights and the land management plan simply reflected these existing commitments and do not affect the back-lying property. See the response to Comment 21.7.*

22. Residential

22.1 Comment: We have been led to believe that a new proposed Tellico Reservoir Management Plan for Bakers Creek/Wear Bend area from the old Morgantown Cemetery to Highway 411 is zoned/slated for industrial development. We urge you to consider that this area be zoned for recreation or residential development.

Comment by: Lou Padgett

TVA Response: *Comment noted. The Wear Bend Peninsula was conveyed to TRDA for industrial use and is not considered for reallocation under this planning process. An allocation change proposal would need to come from TRDA to TVA and public input would be solicited during the review of the proposal.*

22.2 **Comment:** Appear to be additional Residential lands, parcel #27 for example, taken from previous designation of C/PU/OS. These allow for "other activities" like fill, excavation and grading. Any additional residential property essentially removes that shoreline from all but very limited public use and has fewer restrictions on levels of abuses which are allowed. Again, doesn't seem like a good idea for the whole, only the few.

Comment by: Meredith Clebsch

TVA Response: *Parcel 27 is among those areas that are proposed as residential because they are currently impacted by private water use facilities and because residential water access rights already exist. The effort was not to create additional residential lands but to depict the conditions as they exist. However, even under these conditions, any requests for private water use facilities in this area will receive an appropriate environmental review. In addition, new shoreline policies regulating the use of TVA shoreline properties are much more stringent and would be applied as appropriate.*

22.3 **Comment:** The League is opposed to the allocation of TVA lands for residential purposes. Taking into consideration that TVA disbursed 11,151 acres to the Tellico River Development Agency for the purpose of economic development, we strongly oppose the development of remaining TVA public lands on Tellico Reservoir.

Comment by: Marty Marina, Tennessee Conservation League

TVA Response: *The Alternative B plan would allocate as residential those areas with existing access rights and/or areas clearly impacted by existing residential development. What appears to be new residential designations is in fact a recognition of these access rights or existing conditions. Neither alternative creates additional residential property along the shoreline of Tellico Reservoir.*

22.4 **Comment:** The large Wear Bend tract has, as I understand it, already been changed from industrial land to residential land. Would its use not be more appropriate as a natural area? Could TVA regain control over the land? Could the agency persuade TRDA to develop or to encourage the development of a low impact use on the land--lower, even, than residential?

Comment by: Edward E. C. Clebsch, Ph.D

TVA Response: *The land use of the Wear Bend Peninsula is not considered under either alternative and remains as industrial development property administered under TRDA's ownership. Issues relating to the development of the land would be directed to the TRDA Board*

23. River Corridor

23.1 **Comment:** I have no objection to this land use provided precautions are taken to avoid contaminating the water supply.

Comment by: Charles P. Furney, Jr.

TVA Response: *Comment noted.*

24. SMI

24.1 **Comment:** Residential Access Zone: Residential access to the reservoir is a reasonable aspect of the updated Plan given its recreational objective. However, access should be carefully managed to monitor the number of people recreating in the area to help control the environmental impacts introduced by people. Any residential development of the TVA Tellico lands should be consistent with TVA guidelines documented within the TVA Shoreline Management Initiative FEIS relative to criteria for developable lands, buffer strips, and dock configuration and construction.

Comment by: Heinz Mueller, Environmental Protection Agency)

TVA Response: *Comment noted.*

24.2 **Comment:** If permits to access lakefront from backlying property owners are available and permits to construct boat docks are potentially available, should not the permitees be required to mitigate soil and other disturbances just as TVA itself is required to mitigate disturbances to wetlands and other regulated lands?

Comment by: Edward E. C. Clebsch, Ph.D

TVA Response: *All permitting actions on or across TVA property are dependent on the results of TVA's environmental review. Best management practices are required for all ground disturbing activities that would impact water quality or aquatic ecosystems.*

25. Socio-Economic

25.1 **Comment:** The Plan and DEIS put the Tellico Project in a regional perspective in only the most superficial ways. Economic impacts of the project are essentially not addressed in terms of dollars, and so it is with ecological, (even!) environmental, and recreational impacts. I would like to see addressed what the economic impact of Alternative A had been to date and what its impact will be in future decades, and similarly, what the economic impacts of your preferred Alternative B will be. Further, they need to be compared.

Comment by: Edward E. C. Clebsch, Ph.D

TVA Response: *The uncertainties associated with the decisions that ultimately would be made under either alternative preclude any reasonable quantification of the economic impacts. Demand and the decisions of other agencies and of the private sector will determine the actual development that occurs, within the framework set by the Land Management Plan. Attempts to forecast these decisions would result in a long series of assumptions that could be more misleading than enlightening. Some of the more forseeable impacts from use of reservoir lands are described in Section 3.9 of the FEIS.*

26. TRDA

26.1 **Comment:** We also would question, but not ask for in the DEIS, the usefulness and procedures of TRDA. It looks like another "Fleecing of America," a gold mine for a few developers with deep pockets or political connections.

Comment by: Fegan & Dana Kenny

TVA Response: *Comment noted.*

26.2 **Comment:** TVA needs to address its relationship with TRDA. TRDA seems to have outlived any conceivable usefulness. The financial arrangement with TVA, not paying back for the lands it develops and so continuing to develop, seems highly counter productive for the region as a whole, not to mention damned nonsensical from any perspective. I would suggest that some one with TVA address this issue and assist in redirecting TRDA's resources toward more positive land use measures more in tune with the desires of those of us living in the region.

Comment by: Meredith Clebsch

TVA Response: *Comment noted. See response to Comment 19.5.*

27. Transportation

27.1 **Comment:** Please rethink the industrial development plans for the Baker Creek-Wear Bend area. The present roads are certainly inadequate. The thought of traffic on E. Tellico Parkway and down the cemetery road is very wrong. Tellico Lake does not need any industrial pollution from factories. The families with loved ones in the Morganton Cemetery must be very worried.

Comment by: Nancy and Charles Johnson

TVA Response: *The Baker Creek-Wear Bend Peninsula area is owned by TRDA and its land use is not a part of either alternative action. The cemetery road, as referred to, is located on TVA property. The trustees of the privately owned Morganton Cemetery have perpetual deeded access rights for a road to the cemetery. No change in these rights is proposed.*

Access to the Baker Creek-Wear Bend area is from East Tellico Parkway, which has recently been upgraded at its intersection with Highway 411. No significant change in traffic in this area is anticipated to result from TVA's proposed action. Additional upgrading would likely be required if TRDA develops the Baker Creek-Wear Bend area.

27.2 **Comment:** We have a two lane road over Fort Loudoun Dam. As a deputy sheriff I have had to cross the Dam on many life threatening emergencies. Hwy. 321 through Lenoir City is a nightmare during peak hours. Where is all the traffic caused by this project going to go? Anyone who travels Hwy. 11E can tell you how dangerous it is—there is no more room for increased traffic in Loudon County.

Comment by: John Houston

TVA Response: *TVA has been cooperating with the Tennessee Department of Transportation on a proposal to upgrade U.S. 321 (State Route 73) in Loudon County to increase traffic capacity. This will likely be accomplished by improving lane and shoulder widths, sight distance and by adding lanes to increase traffic capacity.*

28. TVA

28.1 **Comment:** If TVA is supposed to be good at one thing, it is regional planning. Do the forecasts and chronicle the land use changes, and get the data disseminated to communities on a regular basis. Then EIS documents won't be traumatic.

Comment by: Robert Lowery

TVA Response: *Comment noted.*

29. Zone 3, 4

29.1 **Comment:** The changed Zone of #23 concerns me greatly because it seems unnecessary, and only a small step to lump the management of this parcel into the Campground, which is TRDA managed. Not good. I''d very much like to see this changed to Zone 3 or 4.

Comment by: Meredith Clebsch

TVA Response: *The proposed use of Parcel 23 under Alternative B has been changed from Zone 6, Recreation to Zone 4, Natural Resource Conservation.*

APPENDIX B-1. PROPOSED RIVER CORRIDOR WATER USE FACILITY GUIDELINES FOR TELLICO RESERVOIR

The type or style of the water use facility allowed on the River Corridor would depend on the location of the site. Generally, the further upstream the facility, the more restrictive the approval. The access rights of a landowner requesting a water use facility must first be verified and the 26a compliance checks (navigation, flood control, public lands, and environmental) must then be completed. Additional guidelines such as those listed below would be applied in reviewing applications for water-use facilities on the River Corridor:

- In the upper and middle regions of the River Corridor, approved facilities would be parallel to the shore and designed for the purpose of launching/mooring light water craft such as canoes or john-boats.
- No launching ramps, retaining walls, or other types of facilities that are the cause of major ground disturbance would be approved.
- The applicant would be allowed to access the facility by the clearing of a pathway only. The width of the pathway will be restricted to 6 feet or less and would be located to avoid any potential conflict with sensitive natural or cultural resources.
- No clearing to the right or left of the pathway would be permitted.

Restrictions of the kind described above would be included in permits for water use facilities on the River Corridor in addition to the inclusion in these permits of restrictions contained in TVA's Shoreline Management Policy.

APPENDIX B-2. PLANNING TEAM MEMBERS

Akers, Steven L., Little Tennessee Watershed Team, Land Use Specialist/Tellico Planning Project Leader

Becker, Donald C., Watershed Projects Specialist

Becker, Patsy R., Specialist/Melton Hill Planning Project Leader

Blackburn, Jerry D., Little Tennessee Watershed Team, Program Administrator

Boardman, Spencer D., Reservoir Lands Planning Specialist

Cuthbertson, Darrell C., Little Tennessee Watershed Team, Land Use Specialist

Draper, Harold M., NEPA Specialist

Duffey, Janet L., Little Tennessee Watershed Team, Land Use Specialist

Edmondson, Frank B. (Bucky), Upper Holston Watershed Team/Senior Land Use Specialist/Boone Planning Project Leader

Ellenburg, Charles H., Little Tennessee Watershed Team, Land Use Specialist (Recreation)

Falco, Paul S., Little Tennessee Watershed Team, Senior Land Use Specialist

Farrell, Robert (Woody) G., Little Tennessee Watershed Team, Team Manager

Horton, Ruth M., Land Use Specialist

James, Wesley K., Little Tennessee Watershed Team, Wildlife Biologist

McHone, Brenda L., Little Tennessee Watershed Team, Clerk

Miller, Jack W., Little Tennessee Watershed Team, Land Use Specialist

Newman, Joyce K., (retired) Little Tennessee Watershed Team, Land Information Technician

Rauch, Eric W., Mideast Regional Manager

Searcy, Charlene B, Little Tennessee Watershed Team, Land Information Technician

Toennisson, Richard L., Regional Environmental Scientist

APPENDIX B-3. CRITERIA FOR PARCEL RATING AND RANKING

Criteria for Recreation

Natural Resource Conservation Zone 4	Land Ownership	Aesthetics
River Corridor	H. >5 miles public land ownership M. 3-5 miles of uninterrupted public land L. < 3 miles public land ownership	H. visual appeal very pleasing M. visual appeal slightly distracted L. visual appeal very poor

Natural Resource Conservation Zone 4	Land Base	Shoreline	Land Use
Informal Recreation (Recreation pursuits on undeveloped land)	H. > 5 acres; < 15% slope M. 2-5 acres; 15-20% slope L. < 5 acres; > 20% slope	H. easy access; use capability diverse M. fair access; use capability limited L. poor access & use capability	H. adjoining land use compatible M. adjoining land use questionable L. adjoining land use detracts

Recreation Zone 6	Land Base	Forestation	Shoreline	Harbor Area	Reservoir Drawdown	Location	Road Access	Outside Interest
Public Parks (Local, state, or federal parks)	H. >20 acres; 1-10% slope M. 10-20 acres; 10-15% slope L. <5 acres; >15% slope	H. >50% cover M. 25-50% cover L. < 25% cover	H. <15% slope underwater; no water hazards M. 15-20% slope underwater; correctable hazards L. > 20% slope underwater; prohibitive hazards	Not applicable	H. minimal visual aesthetic impact M. moderate visual aesthetic impact L. major visual aesthetic impact	H. major area of need M. may be needed L. duplicates or is questionable	H. road to the site M. road within ½ mile L. road > ½ mile away	H. Use requested M. Potential exists L. Unlikely
Commercial (Campgrounds & marinas & resorts)	H. >10 acres; 1-5% slope M. 5-10 acres; 5-10% slope L. minimum 5 acres; >10% slope	H. <25% cover M. 25-50% cover L. > 50% cover	H. <15% slope underwater; no water hazards M. 15-20% slope underwater; correctable hazards L. > 20% slope underwater; prohibitive hazards	H. >10 acres; wind-protected M. 5-10 acres; partial protection L. < 5 acres; no natural protection	H. minimal visual aesthetic impact M. moderate visual aesthetic impact L. major visual aesthetic impact	H. major area of need M. may be needed L. duplicates or is questionable	H. road to the site M. road within ½ mile L. road > ½ mile away	H. Use requested M. Potential exists L. Unlikely
Water Access (Lake or river access sites)	H. >3 acres M. 1-3 acres L. <1 acre	Not applicable	H. <15% slope underwater; no water hazards M. 15-20% slope underwater; correctable hazards L. > 20% slope underwater; prohibitive hazards	Not applicable	Not applicable	H. major area of need M. may be needed L duplicates or is questionable	H. road to the site M. road within ½ mile L. road > ½ mile away	H. Use requested M. Potential exists L. Unlikely

Rating Categories: H. = high; M. = medium; L. = low.

Criteria for Industrial Development

Capability	Land Base	Land Slope	Shape	Height Above Water	Flooding	Barge Accessibility	Miles To Major State Or Federal Highway	Miles To Railroad	Availability Of Utilities	Road Access
Industrial Site	H. > 100 acres M. 25 to 100 acres L. < 25 acres	H. 1 to 5 percent M. 5 to 10 percent L. > 10 percent	H. .fairly rectangular M. square L. irregular	H. < 20 feet M. 20 to 40 feet L. > 40 feet	H. majority above structure profile M. 50 percent above structure profile L. majority below structure profile	H. minor or no dredging required M. some dredging required L. major dredging required or no barge available	H. < 2 M. 2 to 5 L. > 5	H. < 1 M. 1 to 2 L. > 2	H. all utilities available M. some utilities available L. no utilities available	H. road to the site M. road within ½ mile of site L. road greater than ½ mile of site
Industrial Access	H. > 10 acres M. 5 to 10 acres L. minimum of 5 acres	H. 1 to 5 percent M. 5 to 10 percent L. > 10 percent	H. 5 to 15 percent M. 15 to 20 percent L. > 20 or < 5 percent	H. < 20 feet M. 20 to 40 feet L. > 40 feet	H. majority above structure profile M. 50 percent above structure profile L. majority below structure profile	H. minor or no dredging required M. some dredging required L. major dredging required or no barge available	H. < 2 M. 2 to 5 L. > 5	H. < 1 M. 1 to 2 L. > 2	H. all utilities available M. some utilities available L. no utilities available	H. road to the site M. road within ½ mile of site L. road greater than ½ mile of site

Rating Categories: H. = high; M. = medium; L. = low.

Criteria for Natural Resource Stewardship

Overland Access	Ecological Diversity	Habitat Management	Cost Recovery	Compatibility of Adjacent Land Use	Multiple Use Potential	Intensity of Current Use	Natural Resources Partnerships
Existing Road Network	> 5 Ecological Communities Or Successional Stages	Easily Managed	High	Adjacent Land Use Would Have No Effect On Management Decisions	3 To 5 Potential Uses	N/A	N/A
Overland Access Possible	3 To 5 Ecological Communities Or Successional Stages	Could Be Managed	Medium	Adjacent Land Use Could Preclude Some Management Options	1 To 3 Potential Uses	N/A	N/A
Overland Access Unavailable	1 To 3 Ecological Communities Or Successional Stages	Difficult To Manage	Low	Adjacent Land Use Could Prevent Resource Management/Utilization	Single Use Potential	N/A	N/A
Existing Road Network	N/A	N/A	High	Adjacent Land Use Would Have No Effect On Management Decisions	3 To 5 Potential Uses	Year Round Use	N/A
Overland Access Possible	N/A	N/A	Medium	Adjacent Land Use Could Preclude Some Management Options	1 To 3 Potential Uses	2 Or 3 Season Use	N/A
Overland Access Unavailable	N/A	N/A	Low	Adjacent Land Use Could Prevent Resource Management/Utilization	Single Use Potential	< 2 Season Use	N/A
Existing Road Network	N/A	Easily Managed	High	Adjacent Land Use Would Have No Effect On Management Decisions	3 To 5 Potential Uses	N/A	2 Or More Potential Partners; Or 2 Or More Partnerships In Place
Overland Access Possible	N/A	Could Be Managed	Medium	Adjacent Land Use Could Preclude Some Management Decisions	1 To 3 Potential Uses	N/A	1 Or 2 Potential Partners Or 1 Or 2 Potential Partnerships In Place
Overland Access Unavailable	N/A	Difficult To Manage	Low	Adjacent Land Use Could Prevent Resource Management/Utilization	Single Use Potential	N/A	No Potential for Partnerships; and No Partnerships in Place
> $5000	N/A	> 2 Prior Investors	High	N/A	N/A	N/A	2 Or More Partners Have Invested
$0 to $5000	N/A	1 To 2 Prior Investors	Medium	N/A	N/A	N/A	1 To 2 Partners Have Invested
No Prior Investment	N/A	No Prior Investors	Low	N/A	N/A	N/A	No Prior Investments

Definitions For Natural Resources Capability/Suitability Criteria

- **List of Primary Land Use/Ecological Community Types Used For Determining Level Of Diversity**

  Managed Open Lands

  Cropland
  Pasture or Hay
  Orchards/Groves/Vineyards
  Maintained Early Successional (Includes Old Field, Scrub/Shrub)

  Forest Lands*

  Deciduous Forest
  Evergreen (Coniferous) Forest
  Mixed (i.e., Deciduous/Evergreen) Forest

  * Age/size class modifiers (i.e., seedling/sapling, pole, saw timber, and late successional) may be applied to better define stand development/condition

  Wetland & Riparian Communities

  Forested Wetlands
  Scrub/Shrub Wetlands
  Emergent Wetlands
  Forested Riparian Zones

- **Multiple-Use Categories**

  Small Game Lands
  Big Game Lands
  Waterfowl Areas
  Song Bird Observation Areas
  Waterfowl Observation Areas
  Raptor Observation Areas
  Large Mammal Observation Areas
  Small Mammal Observation Areas
  Amphibian/Reptile Breeding/Observation Areas
  Forest Production Areas

- **Investment Types**

  Forestry Research Activities
  Wildlife Habitat Improvements
  Wildlife Research Activities

Forest Management Investments/Activities
Present/Future Resource Value (i.e., Net Worth)

- **Potential Partnership Groups**

  Educational Institutions
  Nongovernmental Organizations
  State Agencies
  Other Federal Agencies

APPENDIX B-4. TVA UNCOMMITTED PARCEL RATING AND RANKING

Parcel	Sensitive Resources				IND		NAV		POW		dREC		iREC		NRS		VIS	WOA		(Comments)
No.	H	C	W	V	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rate	Rank	
1a	Y	N	N	N	N	N	N	N	N	N	N	N	M	M	H	H	M	N	N	Historic Concerns
1b	N	N	Y	N	N	N	N	N	N	N	N	N	M	M	H	H	M	N	N	Historic Concerns
1c	N	N	N	N	N	N	N	N	N	N	N	N	M	M	H	H	M	N	N	Historic Concerns
2a	Y	Y	N	Y	N	N	N	N	N	N	N	N	M	M	M	H	N/A	N	N	
2b	Y	N	N	Y	N	N	N	N	N	N	N	N	M	M	M	H	N/A	N	N	
3a	N	Y	N	Y	N	N	N	N	N	N	N	N	H	H	H	H	N/A	N	N	Nav Marker
3b	N	N	N	Y	N	N	N	N	N	N	N	N	H	H	H	H	N/A	N	N	Nav Marker
4a	N	Y	N	Y	N	N	N	N	N	N	N	N	H	H	H	H	N/A	N	N	Nav Marker
4b	N	N	N	Y	N	N	N	N	N	N	N	N	H	H	H	H	N/A	N	N	Nav Marker
5	N	N	N	N	N	N	N	N	N	N	N	N	L	L	L	M	M	N	N	
6	N	N	N	N	N	N	N	N	N	N	M	M	M	M	L	M	M	N	N	
7	N	N	N	Y	N	N	N	N	N	N	N	N	M	M	L	M		N	N	
8	N	N	N	N	N	N	N	N	N	N	N	N	L	L	L	M	M	N	N	
9	N	N	N	N	N	N	N	N	N	N	N	N	L	L	L	M	M	N	N	
10 a	N	N	Y	N	N	N	N	N	N	N	M	M	M	M	M	M	M	N	N	Historic Concerns
10b	N	N	N	N	N	N	N	N	N	N	M	M	M	M	M	M	M	N	N	Historic Concerns
11 a	N	N	Y	N	N	N	N	N	N	N	N	N	L	M	L	M	M	N	N	Historic Concerns
10	N	N	N	N	N	N	N	N	N	N	N	N	L	L	L	M	L	N	N	
11	N	Y	N	Y	N	N	N	N	N	N	L	L	L	L	M	M	N/A	N	N	Historic Concerns
14a	N	Y	N	N	N	N	N	N	N	N	N	N	L	M	L	M	M	N	N	Historic Concerns
14b	N	N	N	N	N	N	N	N	N	N	N	N	L	M	L	M	M	N	N	Historic Concerns
15a	N	Y	N	N	N	N	N	N	N	N	N	N	L	L	L	M	L	N	N	Historic Concerns
15b	N	N	N	N	N	N	N	N	N	N	N	N	L	L	L	M	L	N	N	Historic Concerns
16	Y	N	Y	Y	N	N	N	N	N	N	N	N	L	M	L	M	N/A	N	N	Historic Concerns
17	N	N	N	Y	N	N	N	N	N	N	N	N	L	M	L	M	N/A	N	N	Historic Concerns
18	N	N	N	N	N	N	N	N	N	N	N	N	L	L	L	M	L	N	N	
19	N	N	N	Y	N	N	N	N	N	N	N	N	M	M	L	M	N/A	N	N	

IND = Industrial
NAV = Navigation
POW = Power
dREC = developed Recreation
iREC = informal Recreation

NRS = Natural Resource Stewardship
VIS = Visual
WOA = Wildlife Observation Area
H = Heritage
C = Cultural

W = Wetlands
V = Visual
Rate/Rank
Y = yes

N = no
N/A = not applicable
H = high
M = medium
L = low

APPENDIX C-1. STATE HISTORIC PRESERVATION OFFICER MEMORANDOM OF AGREEMENT

MEMORANDUM OF AGREEMENT
PURSUANT TO 36 CFR § 800.4(b)(2) and 800.6(b)(1)(iv)

WHEREAS, the Tennessee Valley Authority (TVA) has proposed to implement a Tellico Reservoir Land Management plan for TVA land holdings along the Tellico Reservoir in Blount, Loudon, and Monroe Counties; and

WHEREAS, TVA has determined that the implementation of the Tellico Reservoir Land Management plan will have an effect upon historic properties that are eligible for listing in the National Register of Historic Places (NRHP), as well as other historic properties that are potentially eligible for inclusion in the NRHP, and has consulted with the Tennessee State Historic Preservation Officer (SHPO), the Eastern Band of Cherokee Indians, the United Keetoowah Band, the Cherokee Nation of Oklahoma, the Tennessee Commission of Indian Affairs, the Muscogee (Creek) Nation of Oklahoma, and the Poarch Band of Creek Indians pursuant to 36 CFR § 800, regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. 470f). and

WHEREAS, TVA has conducted archaeological investigations along lands considered in the Tellico Reservoir Land Management plan; and

WHEREAS, all consulting parties will be invited to concur in this Memorandum of Agreement; and

WHEREAS, the Final Environmental Impact Statement for the Tellico Reservoir Land Management plan, is made a part of this agreement by reference as "Appendix A." Appendix A will include a clearly delineated map of the APE for the Tellico Reservoir Land Management plan; and

NOW THEREFORE, TVA and the Tennessee SHPO agree that the undertaking shall be implemented in accordance with the following stipulations. TVA Senior Archaeologist, Cultural Resources, or the designee thereof, shall act for TVA in all matters concerning the administration of this agreement.

Stipulations

TVA will ensure that the measures outlined below relating to identification, evaluation, and treatment of historic properties are carried out within the above-referenced APE prior to the commencement of any ground-disturbing activities. In addition, adjoining landowners with a demonstrated interest in a specific ground-disturbing activity due to the nature of their legal or economic relation to a particular undertaking will be invited to be consulting parties pursuant to 36 CFR § 800(c)(6). This agreement allows phased identification, evaluation, and treatment of the historic properties located within the APE. TVA will ensure the stipulations in this document are carried out in consultation with the SHPO and signatory consulting parties.

1. IDENTIFICATION:
TVA shall conduct a survey to identify all previously unrecorded historic properties within the APE as defined in Appendix A of the Tellico Reservoir Land Management plan. The survey must be carried out in a manner consistent with the Secretary of the Interior's Standards and Guidelines for Identification (48 FR 44720-23) and the Tennessee SHPO Standards and Guidelines for Architectural and Archaeological Resource Management Studies. This survey shall be conducted in consultation with the SHPO and signatory consulting parties, and a written report of the survey shall be submitted to the SHPO for review and comments.

2. EVALUATION:
TVA shall, in consultation with the SHPO and signatory consulting parties, evaluate the historic significance of properties identified through the survey in accordance with 36 CFR § 800.4(c). For properties that have been determined to be potentially eligible for the NRHP, TVA shall subject these properties to Phase II site evaluation in a manner consistent with the Secretary of the Interior's Standards and Guidelines for Identification (48 FR 44720-23) and the Tennessee SHPO Standards and Guidelines for Architectural and Archaeological Resource Management Studies. The SHPO and signatory consulting parties shall review and comment on the scope of work (SOW) prior to the implementation of the survey. This evaluation shall be conducted in consultation with the SHPO and signatory consulting parties, and a written report of the survey shall be submitted to the SHPO for review and comments.

3. TREATMENT PLAN:

a. AVOIDANCE, PROTECTION, AND MAINTENANCE:
TVA, in consultation with the SHPO and signatory consulting parties, shall ensure that historic properties determined eligible for listing in the National Register of Historic Places shall be avoided whenever prudent and feasible by any activities that could affect the characteristics of a site that qualify it for listing in the NRHP. In the implementation of the Tellico Reservoir Land Management plan, alternatives to avoid adversely affecting historic properties eligible for the NRHP will be considered. All historic properties, subsequently discovered or identified and determined eligible by the evaluation process under Stipulation 2, that are avoided will be protected by a buffer zone established by consultation with the SHPO and signatory consulting parties. Furthermore, TVA will develop a protection and maintenance plan for historic properties within the timetable under Stipulation 6.b. this plan will comply with the recommended approaches to rehabilitation set forth in the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (U.S. Department of the Interior, National Park Service, 1983). This plan will be developed in consultation with the SHPO. TVA will seek and consider the views of all signatories to this agreement and other interested parties.

b. DATA RECOVERY:
When historic properties eligible for the National Register only under Criterion (d), as defined in 36 CFR § 60.4, will be adversely affected by unavoidable physical destruction or damage and all avenues of avoidance have been considered, data recovery will be implemented. In such an instance, TVA shall develop a treatment plan in consultation with the SHPO and signatory consulting parties for the recovery of historic and archaeological data from sites that are determined to be eligible for inclusion in the NRHP. Because of the unique or nearly unique nature of each archaeological site, requirements for mitigation will be determined through a process of consultation with the SHPO. TVA shall ensure that a data recovery plan is developed in consultation with the SHPO and signatory consulting parties to resolve adverse effects through recovery of significant information from historic properties.

The data recovery plan (a site specific research design and implementing SOW) shall be developed in accordance with 36 CFR §§ 800.5 and 800.6 and will be consistent with the Secretary of the Interior's Standards and Guidelines for Identification (48 FR 44720-23). Furthermore, to the best of TVA's knowledge and belief, no human remains, associated or unassociated funerary objects, sacred objects, or objects of cultural patrimony as defined in 25 U.S.C 3001, the Native American Graves Protection and Repatriation Act (NAGPRA), are expected to be encountered in the archaeological investigations. However, should human remains be encountered the treatment of such remains will be carried out in accordance with Stipulation 5 of this agreement. A written report of the excavation shall be submitted to the SHPO for review and comments. The data recovery plan shall specify, at a minimum:

1. the property, properties, or portions of properties where data recovery is to be carried out;

2. any property, properties, or portions of properties that will be destroyed without data recovery;

3. the research questions to be addressed through the data recovery, with an explanation of their relevance and importance;

4. the field and laboratory methods to be used, with an explanation of their relevance to the research questions;

5. the methods to be used in analysis, data management, and dissemination of data, including a schedule;

6. the proposed disposition of recovered materials and records. The proposed location of this material will be at the University of Tennessee, Knoxville McClung Museum except for items specified under Stipulation 5 below;

7. proposed methods for involving the interested public in the data recovery;

8. proposed methods for disseminating results of the work to the interested public;

9. a proposed schedule for the submission of progress reports to the SHPO; and

10. a plan delineating the manner in which historic properties, human remains, and associated funerary objects discovered subsequent to the ratification of this agreement document would be treated.

The TVA shall provide the SHPO and signatory consulting parties an opportunity to monitor the implementation of the data recovery plan.

4. REPORTS:
TVA shall ensure that all historical and archaeological investigations undertaken for compliance with this agreement are recorded in formal written reports that meet the Secretary of the Interior's Standards and Guidelines for Identification (48 FR 44720-23) and the Tennessee SHPO Standards and Guidelines for Architectural and Archaeological Resource Management Studies. The SHPO shall be afforded thirty (30) days to review and comment on any archaeological or historical reports submitted as compliance with this agreement.

5. TREATMENT OF HUMAN REMAINS:
TVA shall ensure that the treatment of any human remains discovered within the project area complies with all Federal and State laws concerning archaeological sites and treatment of human remains. Should human remains be encountered during historic properties investigations or post-review discovery, all ground disturbing activities in the vicinity of the human remains will be ceased immediately. Should human remains be encountered, within forty-eight (48) hours TVA will notify signatory consulting parties and invite them to comment. TVA shall ensure that the appropriate consultations are conducted pursuant to 36 CFR §§ 800.5 and 800.6.

Furthermore, TVA, after consultation with signatory consulting parties in accordance with the provisions of NAGPRA, shall ensure that any Native American human remains and associated funerary objects excavated during the survey, evaluation, or data recovery of historic properties will be reburied within sixty (60) days of completion of any investigations specified in the research design. The curation of the human remains and associated funerary objects will be at the University of Tennessee, Knoxville McClung Museum during this interim.

6. TIMETABLES FOR COMPLIANCE:

a. Consistent with Stipulation 7 that allows phased compliance, TVA shall ensure that the commitments in this agreement are met prior to commencement of any ground-disturbing activities. In the event that previously unidentified historic properties should be encountered during the implementation of any ground-disturbing activities, consultation with the SHPO and signatory consulting parties will be conducted to determine where work can resume while the effects to the historic property are addressed.

b. TVA will develop a protection and maintenance plan for historic properties within two (2) years of the acceptance of this agreement.

c. The SHPO and signatory consulting parties shall have thirty (30) days to review and comment on all archaeological reports of investigation and proposed data recovery plans.

7. PHASED COMPLIANCE:

Consistent with 36 CFR § 800.4(b)(2), this agreement allows phased identification, evaluation, and treatment of archaeological sites in order to meet the requirements of Section 106 of the National Historic Preservation Act (NHPA).

8. LAND TRANSFER OF PROPERTY RIGHTS:

Prior to the transfer, lease or sale, of any parcel to a third party, TVA will ensure that all requirements of Section 106 of the NHPA and its implementing regulation (36 CFR § 800) have been met including Stipulations 1 - 8 of this agreement. The instrument of conveyance shall contain, when necessary to protect historic properties, a legally binding preservation covenant for the protection of such properties prepared in consultation with the SHPO and signatory consulting parties. TVA may release the grantee from the preservation covenant in whole or in part, as appropriate, pursuant to the terms of the covenant and after consultation with the SHPO and signatory consulting parties.

9. ADMINISTRATIVE CONDITIONS:

a. If Stipulations 1 - 8 have not been implemented within ten (10) years, this agreement shall be considered null and void, unless the signatories have agreed in writing as provided in Paragraph 9.b. below to an extension for carrying out its terms. If no agreement is reached on an extension at the end of this 10-year period, TVA and the SHPO will resume consultation pursuant to 36 CFR § 800.

b. If Stipulations 1 - 8 have not been implemented within nine (9) years from the date of this agreement's execution TVA and the SHPO shall review the agreement to determine whether the agreement should be extended. If an extension is deemed necessary, TVA and the SHPO will consult in accordance with 36 CFR § 800.6(c) to make appropriate revisions to the agreement.

c. The signatories to this agreement may agree to amend the terms of the agreement. Such amendment shall be effective upon the signatures of all signatory parties to this agreement, which shall be appended to the agreement as an attachment.

d. Should the SHPO object within thirty (30) days after receipt of any plans, specifications, contracts, or other documents provided for review pursuant to this agreement, TVA shall consult with the SHPO to resolve the objection. If TVA determines that the objection cannot be resolved, TVA shall request the further comments of the Advisory Council of Historic Preservation (Council) pursuant to 36 CFR § 800. Any Advisory Council comment provided in response to such a request will be taken into account by TVA in accordance with 36 CFR § 800 with reference only to the subject of the dispute; TVA's responsibility to carry out all actions under this agreement that are not the subjects of the dispute will remain unchanged.

e. If any signatory determines that the terms of the agreement cannot be carried out, TVA and the SHPO shall consult to seek an amendment to the agreement. If the agreement is not amended, any signatory may terminate the agreement within thirty (30) days. TVA shall either execute a new agreement with the signatories pursuant to 36 CFR § 800.6(c)(1) or request the comments of the Council pursuant to 36 CFR § 800.7(a). If comments are requested of the Council, the Chairman of the TVA Board of Directors shall take into account the Council's comments on reaching a final decision regarding the Tellico Reservoir Land Management plan. The Chairman shall document this decision in a manner consistent with 36 CFR § 800.7(c)(4) of the Council's regulations.

f. TVA shall ensure that public involvement is conducted pursuant to 36 CFR § 800.6(a)(4) by inviting comment through Public meetings, Public notices, or other appropriate mechanisms as may be agreed upon by the signatories.

Execution and implementation of this Memorandum of Agreement, its filing with the Council, and its subsequent implementation evidence that TVA has afforded the Council an opportunity to comment on the Tellico Land Management plan, and its effects on historic properties, and that TVA has taken into account the effects of the Tellico Land Management plan on historic properties, and TVA has complied with its obligations under section 106 of NHPA.

SIGNATORIES:

TENNESSEE VALLEY AUTHORITY

By:_____ Date: 6/23/00
[Kathryn J. Jackson, Executive Vice President, RSO&E]

THE TENNESSEE STATE HISTORIC PRESERVATION OFFICER

By:_____ Date: 6/27/00
[Herbert L. Harper, Deputy SHPO]

THE EASTERN BAND OF CHEROKEE INDIANS

By:_____ Date:_____
[James E. Bird, Tribal Historic Preservation Officer]

By:_____ Date:_____

By:_____ Date:_____

By:_____ Date:_____

CONCURRING PARTIES:

By:_____ Date:_____

By:_____ Date:_____

By:_____ Date:_____

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APPENDIX C-2. TERRESTRIAL ECOLOGY – TERRESTRIAL WETLAND WILDLIFE SPECIES

Table C-2.1 Terrestrial/Wetland Wildlife Species, by Community Types, That may Occur in the Vicinity of Tellico Reservoir

Species By Common Name	Scientific Name	Forest Lands	Managed Open Lands (Old Fields and Ag. Fields)	Wetland and Riparian Communities
Amphibians				
Bullfrog	*Rana catesbeiana*			X
Eastern Narrowmouth Toad	*Gastrophryne carolinensis*			X
Green Frog	*Rana clamitans*			X
Wood Frog	*Rana sylvatica*	X		X
Spring Peeper	*Pseudacris crucifer*			X
Woodhouse's Toad	*Bufo woodhousei*	X		
Spotted Salamander	*Ambystoma maculatum*	X	X	
Dusky Salamander	*Desmognathus fuscus*	X		X
Mountain Dusky Salamander	*Desmognathus ochrophaeus*	X		X
Blackbelly Salamander *	*Desmognathus quadramaculatus*	X		X
Longtail Salamander	*Eurycea longicauda*	X		
Spring Salamander	*Gyrinophilus porphyriticus*			X
Northern Slimy Salamander	*Plethodon glutinosus*	X		
Ravine Salamander	*Plethodon richmondi*	X		
Red Salamander	*Pseudotriton ruber*			X
Reptiles				
Black Rat Snake	*Elaphe obsoleta obsoleta*	X		
Eastern Garter Snake	*Thamnophis sirtalis sirtalis*	X	X	X
Northern Ringneck Snake	*Diadophis punctatus edwardsii*	X		
Northern Water Snake	*Nerodia sipedon sipedon*			X
Northern Fence Lizard	*Sceloporus undulatus hyacinthinus*	X		
Five-lined Skink	*Eumeces fasciatus*	X	X	
Broadhead Skink	*Eumeces laticeps*	X		
Common Snapping Turtle	*Chelydra serpentina serpentina*			X
Painted Turtles	*Chrysemys picta spp.*			X
Red-eared Slider	*Trachemys scripta elegans*			X
Eastern Box Turtle	*Terrapene carolina carolina*	X	X	
Birds				
Bald Eagle *	*Haliaeetus leucocephalus*			X
Osprey *	*Pandion haliaetus*			X
Cooper's Hawk *	*Accipiter cooperii*	X	X	
Red-shouldered Hawk	*Buteo lineatus*	X		X

Table C-2.1 Terrestrial/Wetland Wildlife Species, by Community Types, That may Occur in the Vicinity of Tellico Reservoir

Species By Common Name	Scientific Name	Forest Lands	Managed Open Lands (Old Fields and Ag. Fields)	Wetland and Riparian Communities
Red-tailed Hawk	*Buteo jamaicensis*	X	X	
American Kestrel	*Falco sparverius*		X	
Great Horned Owl	*Bubo virginianus*	X	X	X
Barred Owl	*Strix varia*	X		X
Common Screech Owl	*Otus asio*	X	X	
Barn Owl *	*Tyto alba*		X	
Turkey Vulture	*Cathartes aura*	X		
Black Vulture	*Coragyps atratus*	X		
American Crow	*Corvus brachyrhynchos*	X	X	
Hairy Woodpecker	*Picoides villosus*	X		X
Pileated Woodpecker	*Dryocopus pileatus*	X		X
Yellow-shafted Flicker	*Colaptes auratus*	X	X	
Downy Woodpecker	*Picoides pubescens*	X		X
Red-bellied Woodpecker	*Melanerpes carolinus*	X	X	
Belted Kingfisher	*Megaceryle alcyon*			X
Great Blue Heron	*Ardea herodias*			X
Black-crowned Night-Heron	*Nycticorax nycticorax*			X
Green Heron	*Butorides striatus*			X
Spotted Sandpiper	*Actitis macularia*			X
Killdeer	*Charadrius vociferus*		X	X
Wild Turkey	*Meleagris gallopavo*	X	X	
Bobwhite Quail	*Colinus virginianus*		X	
Ruffed Grouse	*Bonasa umbellus*	X		
Mourning Dove	*Zenaida macroura*		X	
Canada Goose	*Branta canadensis*		X	X
Wood Duck	*Aix sponsa*			X
Mallard	*Anas platyrhynchos*			X
Blue-winged Teal	*Anas discors*			X
American Black Duck	*Anas rubripes*			X
Pied-bill Grebe	*Podilymbus podiceps*			X
Northern Cardinal	*Cardinalis cardinalis*	X	X	
Eastern Bluebird	*Sialia sialis*		X	
American Goldfinch	*Carduelis tristis*	X	X	
Grasshopper Sparrow *	*Ammodramus savannarum*		X	
Blue Jay	*Cyanocitta cristata*	X		
Carolina Chickadee	*Parus carolinensis*	X	X	
Red-winged Blackbird	*Agelaius phoeniceus*		X	X

Table C-2.1 Terrestrial/Wetland Wildlife Species, by Community Types, That may Occur in the Vicinity of Tellico Reservoir

Species By Common Name	Scientific Name	Forest Lands	Managed Open Lands (Old Fields and Ag. Fields)	Wetland and Riparian Communities
Rufous-sided Towhee	*Pipilo erythrophthalmus*	X	X	
American Robin	*Turdus migratorius*	X	X	
Northern Mockingbird	*Mimus polyglottos*		X	
Carolina Wren	*Thryothorus ludovicianus*	X	X	
Indigo Bunting	*Passerina cyanea*		X	
Tufted Titmouse	*Parus bicolor*	X		
White-breasted Nuthatch	*Sitta carolinensis*	X		X
Yellow-billed Cuckoo	*Coccyzus americanus*	X	X	
Black-and-white Warbler	*Mniotilta varia*	X		
Wood Thrush	*Hylocichla mustelina*	X		
Eastern Wood Pewee	*Contopus virens*	X		
Red-eyed Vireo	*Vireo olivaceus*	X		
Pine Warbler	*Dendroica pinus*	X		
Great Crested Flycatcher	*Myiarchus crinitus*	X		
Mammals				
Whitetail Deer	*Odocoileus virginianus*	X	X	X
Gray Squirrel	*Sciurus carolinensis*	X		
Southern Flying Squirrel	*Glaucomys volans*	X		
Eastern Chipmunk	*Tamias striatus*	X	X	
Raccoon	*Procyon lotor*	X		X
Eastern Cottontail Rabbit	*Sylvilagus floridanus*		X	
Bobcat	*Lynx rufus*	X		X
Red Fox	*Vulpes vulpes*		X	
Gray Fox	*Urocyon cinereoargenteus*	X	X	
Coyote	*Canis latrans*		X	
Mink	*Mustela vison*			X
Muskrat	*Ondatra zibethicus*			X
Opossum	*Didelphis virginiana*	X	X	
Striped Skunk	*Mephitis mephitis*	X	X	
Groundhog	*Marmota monax*	X	X	
White-footed Mouse	*Peromyscus leucopus*	X	X	
Woodland Jumping Mouse *	*Napaeozapus insignis*	X	X	X
Meadow Jumping Mouse *	*Zapus hudsonius*	X	X	X
Deer Mouse	*Peromyscus maniculatus*	X	X	
Allegheny Woodrat *	*Neotoma magister*	X		
Southern Bog Lemming *	*Synaptomys cooperi*	X		X
Eastern Mole	*Scalopus aquaticus*	X	X	
Least Shrew	*Cryptotis parva*		X	X
Southeastern Shrew *	*Sorex longirostris*	X		X
Short-tailed Shrew	*Blarina brevicauda*	X		X
Gray Bat *	*Myotis grisescens*			X

Table C-2.1 Terrestrial/Wetland Wildlife Species, by Community Types, That may Occur in the Vicinity of Tellico Reservoir

Species By Common Name	Scientific Name	Forest Lands	Managed Open Lands (Old Fields and Ag. Fields)	Wetland and Riparian Communities
Indiana Bat *	*Myotis sodalis*	X		X
Eastern Small-footed Myotis *	*Myotis leibii*	X		X

* Species listed as endangered, threatened, or in need of management federally, by the state of Tennessee, or recommended by the Tennessee Wildlife Resources Agency.

APPENDIX C-3. CONDITION OF HYDROLOGIC UNITS (HUC), RESOURCE ISSUES AND PARCEL ACREAGES BY HUC

Table C-3.1 Condition of Hydrologic Units (HUC) Resource Issues and Parcel Acreages by HUC

HUC ID	Parcel	Acres	Primary Drainage	HUC Rating	Primary Resource Issues
TN-06010201-130	1	33.3		Poor	Lack of public access along the north shore
TN-06010201-140	1	322.1	Browder Bend	Poor	Access development potential, farms being developed
TN-06010201-140	2	6.2			
NC-06010204-010	NP		Tulula Creek	Fair	Agriculture and urban runoff
NC-06010204-020	NP		Santeetlah Lake	Poor	Agriculture runoff, nutrient enrichment, flowage
NC-06010204-030	NP		Tellico headwaters	Poor	Sedimentation and siltation, unpaved roads.
TN-06010204-030	NP		Calderwood Lake	Good	
TN-06010204-040	NP		Upper Abrams Cr.	Good	Park, rare species
TN-06010204-050	NP		Lower Abrams Cr.	Fair	Some development, no access sites, some agricultural.
TN-06010204-060	5	37.1	Little Tennessee R. /Chilhowee Lake	Fair	Agricultural runoff, development, water supply
TN-06010204-060	63	242.6			
TN-06010204-060	72	5.9			
TN-06010204-060	73	5.0			
TN-06010204-060	74	387.5			
TN-06010204-060	75	19.4			
TN-06010204-060	76	21.2			
TN-06010204-060	77	8.5			
TN-06010204-060	78	108.2			
TN-06010204-060	79	2146.7			
TN-06010204-060	80	611.5			
TN-06010204-060	81	29.0			
TN-06010204-060	82	2.1			
TN-06010204-060	83	1.8			
TN-06010204-060	84	2.2			
TN-06010204-060	85	70.2			
TN-06010204-060	86	2.0			
TN-06010204-060	87	78.6			
TN-06010204-060	88	45.2			

Table C-3.1 Condition of Hydrologic Units (HUC) Resource Issues and Parcel Acreages by HUC

HUC ID	Parcel	Acres	Primary Drainage	HUC Rating	Primary Resource Issues
TN-06010204-060	89	21.1	*continued.*		
TN-06010204-060	90	12.6			
TN-06010204-060	91	24.1			
TN-06010204-070	5	1.5	Ninemile Creek	Poor	Failing septic tanks, agricultural runoff, residential development
TN-06010204-070	63	14.5			
TN-06010204-070	64	7.9			
TN-06010204-070	65	4.2			
TN-06010204-070	66	27.6			
TN-06010204-070	67	17.3			
TN-06010204-070	68	77.0			
TN-06010204-070	69	13.0			
TN-06010204-070	70	8.5			
TN-06010204-070	71	11.1			
TN-06010204-070	72	3.2			
TN-06010204-080	NP		Bald River	Fair	Sedimentation and siltation
TN-06010204-090	137	8.3	Tellico River /Tellico Plains	Poor	Sedimentation and siltation, vegetation removal along riverbanks, failing streambanks, agricultural runoff
TN-06010204-090	138	0.3			
TN-06010204-100	5	9.3	Tellico River /Big Creek	Poor	Trash and litter, poor access, agricultural runoff, informal recreation sites, development, encroachments, habitat enhancement for wildlife, pine plantations
TN-06010204-100	117	18.1			
TN-06010204-100	123	51.2			
TN-06010204-100	126	186.2			
TN-06010204-100	127	7.1			
TN-06010204-100	128	184.7			
TN-06010204-100	129	11.8			
TN-06010204-100	130	12.2			
TN-06010204-100	131	81.5			
TN-06010204-100	132	256.3			
TN-06010204-100	133	3.8			
TN-06010204-100	134	149.7			
TN-06010204-100	135	34.5			
TN-06010204-100	136	1.5			
TN-06010204-100	137	156.4			

Table C-3.1 Condition of Hydrologic Units (HUC) Resource Issues and Parcel Acreages by HUC

HUC ID	Parcel	Acres	Primary Drainage	HUC Rating	Primary Resource Issues
TN-06010204-100	138	126.9	*continued.*		
TN-06010204-100	139	2.9			
TN-06010204-110	119	8.7	Ballplay Creek	Poor	Riparian degradation, agricultural runoff, violations and encroachments, some development
TN-06010204-110	120	9.3			
TN-06010204-110	121	21.3			
TN-06010204-110	122	6.8			
TN-06010204-110	123	223.9			
TN-06010204-110	124	199.2			
TN-06010204-120	5	0.2	Tellico River /Confluence with Little T	Fair	Urban and residential runoff, residential development, agricultural runoff, shoreline erosion
TN-06010204-120	58	0.0			
TN-06010204-120	59	6.2			
TN-06010204-120	60	0.0			
TN-06010204-120	63	618.4			
TN-06010204-120	92	7.9			
TN-06010204-120	93	65.0			
TN-06010204-120	94	36.6			
TN-06010204-120	95	68.0			
TN-06010204-120	96	13.4			
TN-06010204-120	97	79.1			
TN-06010204-120	98	27.8			
TN-06010204-120	99	3.0			
TN-06010204-120	100	17.3			
TN-06010204-120	101	11.9			
TN-06010204-120	102	20.9			
TN-06010204-120	103	67.2			
TN-06010204-120	104	104.1			
TN-06010204-120	105	10.5			
TN-06010204-120	106	55.1			
TN-06010204-120	107	18.6			
TN-06010204-120	108	193.7			
TN-06010204-120	109	3.0			
TN-06010204-120	110	266.8			
TN-06010204-120	111	18.1			

Table C-3.1 Condition of Hydrologic Units (HUC) Resource Issues and Parcel Acreages by HUC					
HUC ID	**Parcel**	**Acres**	**Primary Drainage**	**HUC Rating**	**Primary Resource Issues**
TN-06010204-120	117	150.3	*continued*		
TN-06010204-120	118	166.4			
TN-06010204-120	119	40.0			
TN-06010204-120	125	4.1			
TN-06010204-120	126	9.6			
TN-06010204-130	103	33.4	Notchy Creek	Poor	Loss of riparian zones, fringe wetlands, informal recreation, streambank erosion, agricultural runoff
TN-06010204-130	112	45.6			
TN-06010204-130	113	10.1			
TN-06010204-130	114	31.9			
TN-06010204-130	115	19.7			
TN-06010204-130	116	28.9			
TN-06010204-130	117	476.7			
TN-06010204-140	1	255.7	Little Tennessee /Tellico Lake	Poor	Industrial development, fish consumption advisory, road construction, poor access
TN-06010204-140	3	169.9			
TN-06010204-140	4	95.1			
TN-06010204-140	5	36.6			
TN-06010204-140	6	41.9			
TN-06010204-140	7	27.7			
TN-06010204-140	8	45.4			
TN-06010204-140	9	339.8			
TN-06010204-140	10	84.2			
TN-06010204-140	11	502.1			
TN-06010204-140	12	1.9			
TN-06010204-140	13	152.7			
TN-06010204-140	14	22.9			
TN-06010204-140	15	18.2			
TN-06010204-140	16	26.3			
TN-06010204-140	17	2.4			
TN-06010204-140	18	8.6			
TN-06010204-140	19	44.0			
TN-06010204-140	20	82.0			
TN-06010204-140	21	13.0			
TN-06010204-140	22	49.4			

Table C-3.1 Condition of Hydrologic Units (HUC) Resource Issues and Parcel Acreages by HUC

HUC ID	Parcel	Acres	Primary Drainage	HUC Rating	Primary Resource Issues
TN-06010204-140	23	140.1	*continued*		
TN-06010204-140	24	85.3			
TN-06010204-140	26	122.4			
TN-06010204-140	27	15.3			
TN-06010204-140	28	22.9			
TN-06010204-140	29	13.1			
TN-06010204-140	30	5.6			
TN-06010204-140	44	92.5			
TN-06010204-140	45	16.7			
TN-06010204-140	46	18.2			
TN-06010204-140	47	16.0			
TN-06010204-140	48	5.0			
TN-06010204-140	52	129.8			
TN-06010204-140	53	11.7			
TN-06010204-140	54	18.5			
TN-06010204-140	55	17.3			
TN-06010204-140	56	31.0			
TN-06010204-140	57	16.2			
TN-06010204-140	58	31.4			
TN-06010204-140	59	10.4			
TN-06010204-140	60	17.4			
TN-06010204-140	61	19.1			
TN-06010204-140	62	18.2			
TN-06010204-140	63	27.5			
TN-06010204-140	94	0.9			
TN-06010204-140	96	0.0			
TN-06010204-150	5	5.2	Baker Creek	Poor	Home development, habitat loss, sedimentation and siltation, riparian loss, agricultural vegetation use.
TN-06010204-150	29	18.8			
TN-06010204-150	30	3.5			
TN-06010204-150	31	3.9			
TN-06010204-150	32	4.9			
TN-06010204-150	33	25.9			
TN-06010204-150	34	6.0			

Table C-3.1 Condition of Hydrologic Units (HUC) Resource Issues and Parcel Acreages by HUC					
HUC ID	**Parcel**	**Acres**	**Primary Drainage**	**HUC Rating**	**Primary Resource Issues**
TN-06010204-150	35	5.7	*continued*		
TN-06010204-150	36	20.6			
TN-06010204-150	37	5.4			
TN-06010204-150	38	2.7			
TN-06010204-150	39	152.1			
TN-06010204-150	40	30.1			
TN-06010204-150	41	9.2			
TN-06010204-150	42	26.0			
TN-06010204-150	43	19.1			
TN-06010204-150	44	7.9			
TN-06010204-160	45	6.8	Bat Creek	Poor	Agricultural runoff, some development, loss of riparian zones.
TN-06010204-160	46	32.8			
TN-06010204-160	47	6.9			
TN-06010204-160	49	14.0			
TN-06010204-160	50	37.1			
TN-06010204-160	51	34.0			
TN-06010204-170	5	0.5	Fork Creek	Poor	Failing septic tanks, sedimentation and siltation
TN-06010204-170	13	69.4			
TN-06010204-170	14	21.8			
TN-06010204-170	24	4.8			
TN-06010204-170	25	7.5			
TN-06010204-180	5	13.1	Citico Creek	Fair	Sediment from unpaved roads, rare species, poor boat access
TN-06010204-180	79	197.9			

NP denotes no parcel tracts.

APPENDIX C-4. RESERVOIR FISH ASSEMBLAGE INDEX (RFAI)

This discussion of TVA's RFAI methodology was taken from the report of 1998 sampling results (TVA, 1999), but is generally applicable to previous years' sampling and data analysis. Fish are usually included in aquatic monitoring programs because they are important to the aquatic foodweb and because they have a long life cycle which allows them to integrate conditions over time. Fish are also important to the public for aesthetic, recreational, and commercial reasons.

Reservoir fish communities are vastly different from that in the river prior to impoundment due to habitat alterations. Also, differences are expected along a longitudinal gradient with a more riverine community expected at the upper end or inflow of a reservoir and a more lacustrine community expected in the pool near the dam. Other factors to consider in evaluating biotic communities in reservoirs include reservoir operational characteristics (e.g., water depth, water level fluctuation, depth of drawdown for flood control, retention time, stratification, bottom anoxia, substrate type and stability, and depth of withdrawal for discharge) and physical/chemical features owing to geological characteristics of different ecoregions.

All these factors, plus the fact that a reservoir is an artificial system, must be considered in selecting community characteristics or expectations that will be used to evaluate aquatic resource conditions. Given that reservoirs are artificial systems, it is not possible to use the well accepted Index of Biotic Integrity (IBI) approach of using reference sites to determine characteristics or expectations of a reservoir unaffected by human impacts. By definition, IBI specifies that reference conditions should be developed from natural, unaltered habitats (Karr and Dudley, 1981). Therefore, other approaches must be utilized; such as using historical or preimpoundment conditions, predictive models, best observed conditions, or professional judgment. As stated above, preimpoundment conditions are inappropriate due to habitat alterations. The state of the understanding of fish communities in reservoirs simply is insufficient for models to effectively predict species composition and relative abundance. TVA's experience has found use of best observed conditions adjusted using professional judgment as the best approach. Use of best observed conditions requires an extensive database to determine expectations for each metric, and use of professional judgment to adjust scoring ranges requires substantial experience with the group of reservoirs under consideration. To use this concept, results in the data base which approach desired conditions for a given community characteristic are considered representative of best observed conditions. Monitoring results falling within that range would be considered "good."

Another important consideration in developing reference conditions is that care must be taken to compare only those reservoirs for which comparison is appropriate. That is, only those in the same ecoregion and equivalent physical characteristics should be compared. Hence, separation of reservoirs into appropriate classes is a critical step. TVA's monitoring program includes 31

reservoirs. For classification purposes these have been divided into two major groups: run-of-the-river reservoirs (those with short retention times and winter drawdown of only a few feet) and tributary reservoirs (those with long retention times and substantial winter drawdowns). The tributary reservoirs have been further divided into three groups by ecoregion and reservoir physical characteristics. Fish assemblage expectations for each metric (discussed later) have been developed for each of these four reservoir categories.

Table C-4.1 Run-of-River and Tributary Reservoirs

Run-of-River Reservoirs	Tributary Reservoirs		
	Blue Ridge Ecoregion	**Ridge and Valley Ecoregion**	**Interior Plateau Ecoregion**
Kentucky	Apalachia	Cherokee	Tims Ford
Pickwick	Hiwassee	Ft. Patrick Henry	Normandy
Wilson	Chatuge	Boone	Bear Creek
Wheeler	Nottely	South Holston	Little Bear Creek
Guntersville	Parksville	Douglas	Cedar Creek
Nickajack	Blue Ridge	Norris	Beech
Chickamauga	Fontana		
Watts Bar	Watauga		
Fort Loudoun			
Tellico			
Melton Hill			

Sample Collection Methods

Shoreline electrofishing samples were collected during daylight hours from forebay and transition (mid-reservoir) zones of most reservoirs during autumn (September through November 1998). In addition, inflow areas (generally the tailwater area of the upstream data) were sampled on most run-of-the-river reservoirs. Only the forebay was sampled on very small reservoirs or reservoirs where zones were indistinguishable.

A total of 15 electrofishing transects, each covering 300 m of shoreline, was collected from each of the sampled zones. All habitats were sampled in proportion to their occurrence in the zone. Twelve experimental gill nets with five 6.1 m panels (mesh sizes of 2.5, 5.1, 7.6, 10.2, and 12.7 cm) were set for one overnight period in forebay and transition zones. Excessive current prevented use of gill nets in mainstream inflow areas limiting sampling to only electrofishing in these locations. Nets were set in all habitat types, alternating mesh sizes toward the shoreline between sets.

Total length (mm) and weight (g) were obtained for all sport species and channel catfish. Remaining species captured were enumerated prior to release. During electrofishing, fish observed, but not captured, were included if positive identification could be made and counts were estimated when high densities of identifiable fish were encountered. Young-of-year fish were counted separately and were excluded from proportional and abundance metrics due to sampling inefficiencies. Only fish examined closely as a result of obtaining length and weight measurements were inspected externally for signs of disease, parasites, and anomalies. Other species groups often included several individuals which were observed, but not captured, thus the ratio of diseased, etc., was not obtainable for these groups. Natural hybrids (i.e., those known not to be part of a fisheries management program) were included as an anomaly. Field data loggers or data sheets were used to record all sampling results.

Reservoir Fish Assemblage Index (RFAI)

The RFAI uses 12 fish community metrics from five general categories (Hickman and McDonough, 1995). The 12 metrics include:

Species Richness and Composition

1. **Total number of species**--Greater numbers of species are considered representative of healthier aquatic ecosystems. As conditions degrade, numbers of species at a site decline.
2. **Number of piscivore species**--Higher diversity of piscivores is indicative of better quality environment.
3. **Number of sunfish species**--Lepomid sunfish (excludes black basses, crappies, and rock bass) are basically insectivores, and high diversity of this group is indicative of reduced siltation and suitable sediment quality in littoral areas.
4. **Number of sucker species**--Suckers are also insectivores but inhabit the pelagic and more riverine sections of reservoirs.
5. **Number of intolerant species**--This group is made up of species that are particularly intolerant of habitat degradation. Higher densities of intolerant individuals represent better environmental quality.
6. **Percentage of tolerant individuals** (excluding Young-of-Year)--This metric signifies poorer quality with increasing proportions of individuals tolerant of degraded conditions.
7. **Percentage dominance by one species**--Ecological quality is considered reduced if one species dominates the resident fish community.

Trophic Composition

8. **Percentage of individuals as omnivores**--Omnivores are less sensitive to environmental stresses due to their ability to vary their diets. As trophic links are disrupted due to degraded conditions, specialist species such as insectivores decline while opportunistic omnivorous species increase in relative abundance.

9. **Percentage of individuals as insectivores**--Due to the special dietary requirements of this group of species and the limitations of their food source in degraded environments, proportion of insectivores increases with environmental quality.

Reproductive Composition

10. **Number of lithophilic spawning species**--Lithophilic broadcast spawners spawn over rocky substrate and do not provide parental care. This guild is expected to be sensitive to siltation. Numbers of lithophilic spawning species increase in reservoirs providing suitable conditions reflective of good environmental quality.

Abundance

11. **Total catch per unit effort** (number of individuals)--This metric is based upon the assumption that high quality fish assemblages support large numbers of individuals.

Fish Health

12. **Percentage individuals with anomalies**--Incidence of diseases, lesions, tumors, external parasites, deformities, blindness, and natural hybridization are noted for all fish measured, with higher incidence indicating poor environmental conditions.

Establishing scoring criteria (i.e., expectations or reference conditions) requires a substantial data base for each class of reservoir and assumes the data base contains reservoirs with conditions ranging from poor to good for each metric. The smaller the number of reservoirs within a class, the less likely these assumptions can be met and the greater the need for sound professional judgment based on extensive knowledge of reservoir communities being studied. One way to help alleviate this problem is to use several years of results from reservoirs within a class. This not only helps establish baseline conditions for each reservoir, but also has the desirable effect of increasing the data base from which scoring criteria can be developed. However, care must be taken to keep this time period as short as possible; otherwise, constantly changing criteria will prevent recognition of improvements or degradation, if they occur. This potential problem was realized as this monitoring program was being conceived. As a result, it was decided that the maximum desired period to establish baseline conditions and provide the data base to develop scoring criteria would be five years, assuming variations of low, normal, and high flows were experienced in that time frame. This proved to be the case. In practice, scoring criteria for RFAI metrics were reevaluated each year

from 1990 through 1994 as new data were added. Scoring criteria have not been adjusted since 1994.

In developing scoring criteria, a slightly different approach was used for species richness metrics than for abundance and proportional metrics. For species richness metrics, a list was made of all species collected from comparable locations within a reservoir class from 1990 - 1994. This species list was adjusted using inferences of experienced biologists knowledgeable of the reservoir system, resident fish species, susceptibility of each species to collection methods being used, and effects of human-induced impacts on these species. This effort resulted in a list of the maximum number of species expected to occur at a sampling location and be captured by collection devices in use. Given that only one collection effort is exerted each year, this maximum number of species would not be expected to be represented in that one collection. Therefore, the range from zero to 95 percent of the maximum was trisected to provide the three scoring ranges (good, fair, and poor). Although even 95 percent of the maximum number of species at a site would not be expected to be collected in one sampling event, this "high" expectation was adopted to keep these metrics conservative in light of potential uncertainties introduced by relying heavily on professional judgment.

Scoring criteria for proportional metrics and the abundance metric were determined by trisecting observed ranges after omitting outliers. Next, cutoff points between the three ranges were adjusted based on examination of frequency distributions of observed data for each metric along with professional judgment. In some cases, the narrow range of observed conditions required further adjustment based on knowledge of metric responses to human-induced impacts observed in other reservoir classes.

Scoring criteria are used to separate results for each metric into three categories assumed to represent relative degrees of condition of the fish assemblage ranging from good to poor. Each category has a corresponding value: good = 5; fair = 3; and poor = 1. The sum of the 12 metrics constitutes the RFAI score.

Scoring criteria were applied differently to results from the two collection methods (electrofishing and experimental gill netting) depending on the type metric. For the taxa richness, reproductive composition, and fish health metrics, sampling results were pooled prior to scoring. For abundance and proportional metrics, electrofishing and gill netting results were scored separately, then the two scores averaged to arrive at a final metric value.

To arrive at an evaluation of the condition of the fish assemblage at a sample location, scores were evaluated as follows:

Table C-4.2 RFAI Scores and Community Conditions

RFAI Score	12-21	22-31	32-40	41-50	51-60
Community Condition	Very Poor	Poor	Fair	Good	Excellent

References

Hickman, G. D., and T. A. McDonough. 1995. Assessing the Reservoir Fish Assemblage Index - A Potential Measure of Reservoir Quality. Publication in Proceeding of Third National Reservoir Symposium, June 1995, American Fisheries Association. D. DeVries, Editor.

Karr, J. R., and D. R., Dudley. 1981. Ecological Perspective on Water Quality Goals., Environ. Manage. 5:55-68

Tennessee Valley Authority. 1999. Aquatic Ecological Health Determinations for TVA Reservoirs—1998. An Informal Summary of 1998 Vital Signs Monitoring Results and Ecological Health Determination Methods. Primary authors/editors: Don L. Dycus, Dennis L. Meinert, and Tyler F. Baker. TVA Water Management, Clean Water Initiative, Chattanooga, Tennessee.

APPENDIX C-5. PRIME FARMLAND

Table C-5.1 Prime Farmland Soils Found on TVA-Owned Land on Tellico Reservoir

Alcoa Loam	Leadvale Silt Loam
Allegheny Loam	Lindside Silt Loam
Altavista Silt Loam	Lobdell Silt Loam
Barbourville Fine Sandy Loam	Lobelville Cherty Silt Loam
Chagrin Silt Loam	Minvale Silt Loam
Congaree Loam	Neubert Loam
Cumberland Silty Clay Loam	Newark Silt Loam
Decatur Silt Loam	Philo Silt Loam
Decatur Silty Clay Loam	Pope Loam
Dewey Silt Loam	Sequatchie Fine Sandy Loam
Dewey Silty Clay Loam	Sequatchie Loam
Emory Silt Loam	Sequatchie Silt Loam
Emory Silty Clay Loam	Staser Fine Sandy Loam
Etowah Silt Loam	Staser Loam
Greendale Cherty Silt Loam	Staser Silt Loam
Greendale Silt Loam	Statler Loam
Hamblen Silt Loam	Taft Silt Loam
Hermitage Silt Loam	Transylvania Loam
Huntington Loam	Waynesboro Loam
Jefferson Fine Sandy Loam	Whitwell Loam
Landisburg Silt Loam	Wolftever Silt Loam

Table C-5.2	**Tellico Reservoir Land with 10 Acres or More of Prime Farmland Soils**			
Parcel Number	**Units**	**Individual Soil Map Units**	**Acres**	**Total Acres/Parcel**
1	**4**			**189.9**
		Congaree Loam	43.219	
		Emory Silt Loam	6.463	
		Etowah Silt Loam	10.000	
		Huntington Loam	63.597	
		Neubert Loam	1.295	
		Sequatchie Loam	63.602	
		Wolftever Silt Loam	1.695	
35	**2**			**23.5**
		Lindside Silt Loam	23.517	
44/45	**1**			**19.0**
		Alcoa Loam	4.407	
		Hamblen Silt Loam	0.906	
		Neubert Loam	13.659	
46	**1**			**26.5**
		Chagrin Silt Loam	2.778	
		Hamblen Silt Loam	14.956	
		Leadvale Silt Loam	8.806	
61	**1**			**29.2**
		Emory Silt Loam	4.123	
		Etowah Silt Loam	0.815	
		Sequatchie FSL	2.387	
		Sequatchie Loam	9.90	
		Staser FSL	7.20	
		Staser Loam	4.773	
71	**1**			**17.0**
		Hamblen Silt Loam	16.988	
72/78/79	**9**			**416.9**
		Alcoa Loam	7.089	
		Congaree Loam	2.350	
		Etowah Silt Loam	7.022	
		Hamblen Silt Loam	57.109	
		Lobdell Silt Loam	5.332	
		Leadvale Silt Loam	2.050	
		Neubert Loam	3.862	
		Newark Silt Loam	13.882	
		Philo Silt Loam	14.981	

Table C-5.2	**Tellico Reservoir Land with 10 Acres or More of Prime Farmland Soils**			
Parcel Number	**Units**	**Individual Soil Map Units**	**Acres**	**Total Acres/Parcel**
		Pope Loam	4.520	
		Statler Loam	45.987	
		Transylvania Loam	240.069	
		Whitwell Loam	12.564	
73	**3**			**147.6**
		Alcoa Loam	8.393	
		Etowah Silt Loam	115.348	
		Hamblen Silt Loam	10.601	
		Whitwell Loam	13.234	
74	**1**			**16.0**
		Statler Loam	13.364	
		Whitwell Loam	2.591	
90	**1**			**12.0**
		Hamblen Silt Loam	11.912	
112	**1**			**43.0**
		Altavista Silt Loam	8.426	
		Lobdell Silt Loam	23.173	
		Statler Loam	11.387	
113	**1**			**24.1**
		Allegheny Loam	3.50	
		Altavista Silt Loam	2.50	
		Chagrin Silt Loam	4.00	
		Lobdell Silt Loam	2.12	
		Newark Silt Loam	11.968	
125/127	**5**			**106.2**
		Chagrin Silt Loam	26.419	
		Congaree Loam	31.725	
		Hamblen Silt Loam	22.028	
		Staser Loam	18.365	
		Statler Loam	7.652	
126	**4**			**85.1**
		Chagrin Silt Loam	10.840	
		Congaree Loam	19.761	
		Hamblen Silt Loam	14.224	
		Neubert Loam	0.421	

Table C-5.2	**Tellico Reservoir Land with 10 Acres or More of Prime Farmland Soils**			
Parcel Number	**Units**	**Individual Soil Map Units**	**Acres**	**Total Acres/Parcel**
		Sequatchie Loam	4.260	
		Staser Loam	13.912	
		Statler Loam	21.654	
TOTAL ACRES PRIME FARMLAND				**1155.681**

APPENDIX C-6. FLOODPLAINS – FLOOD PROFILES

Table C-6.1 Little Tennessee River - Tellico Reservoir, Flood Profiles					
Mile	**Bridge**	**100-Year Flood**	**Flood Risk Profile**	**TVA Structure Profile**	**Landmark**
0.46		816.2	817.0	820.0	Tellico Dam
1.00		816.2	817.0	820.0	
2.00		816.2	817.0	820.0	
3.00		816.2	817.0	820.0	
3.68		816.2	817.0	820.0	
4.00		816.2	817.0	820.0	
5.00		816.2	817.0	820.0	
6.00		816.2	817.1	820.0	
6.33		816.2	817.1	820.0	
7.00		816.2	817.1	820.0	
8.00		816.3	817.2	820.0	
9.00		816.3	817.2	820.0	
9.66		816.3	817.2	820.0	
10.00		816.3	817.2	820.0	
11.00		816.3	817.3	820.0	
11.90		816.4	817.3	820.0	Bat Creek
12.00		816.4	817.3	820.0	
13.00		816.4	817.4	820.0	
13.31		816.4	817.4	820.0	
13.65		816.4	817.4	820.0	Baker Creek
14.00		816.4	817.4	820.0	
15.00		816.4	817.5	820.0	
16.00		816.4	817.6	820.0	
16.62		816.4	817.6	820.0	Island Creek
16.64		816.4	817.6	820.0	
17.00		816.4	817.6	820.0	
18.00		816.4	817.6	820.0	
18.59	D	816.4	817.6	820.0	L & N Railroad
18.59	U	816.5	817.7	820.0	
19.00		816.5	817.7	820.0	
19.11	D	816.5	817.7	820.0	U.S. Highway 411
19.11	U	816.5	817.7	820.0	
19.17		816.5	817.7	820.0	Tellico River
19.87		816.5	817.9	820.0	
20.00		816.6	817.9	820.0	
20.07		816.6	817.9	820.0	Ninemile Creek
20.10		816.6	817.9	820.0	
20.82		816.6	818.0	820.0	
21.00		816.6	818.0	820.0	
21.17		816.6	818.0	820.0	
22.00		816.7	818.1	820.0	
22.54		816.7	818.2	820.0	

Table C-6.1 Little Tennessee River - Tellico Reservoir, Flood Profiles					
Mile	**Bridge**	**100-Year Flood**	**Flood Risk Profile**	**TVA Structure Profile**	**Landmark**
23.00		816.7	818.2	820.0	
23.43		816.7	818.2	820.0	Smoky Branch
23.73		816.7	818.2	820.0	
24.00		816.7	818.2	820.0	
24.41		816.7	818.2	820.0	
25.00		816.7	818.2	820.0	
25.74		816.7	818.3	820.0	
26.00		816.7	818.3	820.0	
26.73		816.8	818.4	820.0	
27.00		816.8	818.5	820.0	
27.62		816.9	818.6	820.0	
28.00		817.0	818.7	820.0	
28.60		817.0	818.8	820.0	Fourmile Creek
29.00		817.1	818.9	820.0	
29.68		817.2	819.1	820.0	
30.00		817.4	819.4	820.0	
31.00		818.1	820.3	820.0	
31.02		818.1	820.3	820.0	Citico Creek
31.50		818.4	820.8	820.0 - 821.0	
31.55		818.4	820.8	821.0	
31.80		818.8	821.4	821.0 - 822.0	
32.00		819.1	821.8	822.0	
32.20		819.5	822.3	822.0 - 823.0	
32.34		819.7	822.6	823.0	
32.50		820.1	823.1	823.0 - 824.0	
32.80		820.9	824.1	824.0 - 825.0	
33.00		821.6	824.9	825.0	
33.20		822.0	825.4	825.0 - 826.0	
33.30		822.3	825.7	826.0 - 827.0	
33.40		822.5	826.1	827.0 - 828.0	
33.50		822.8	826.4	828.0 - 829.0	
33.57		823.0	826.6	829.0	Chilhowee Dam

D = Downstream at Bridge
U = Upstream at Bridge

Table C-6.2 Tellico River - Tellico Reservoir, Flood Profiles

Mile		100-Year Flood		Flood Risk Profile		TVA Structure Profile		Landmark
0		816.5		817.7		820.0		
0.34		816.5		817.7		820.0		
1.00		816.5		817.8		820.0		
1.40	D	816.5		817.8		820.0		State Route 360
1.40	U	816.5		817.8		820.0		
1.95		816.7		818.1		820.0		
2.00		816.7		818.1		820.0		
3.00		816.7		818.1		820.0		
3.27		816.7		818.1		820.0		
4.00		816.8		818.2		820.0		
4.20		816.8		818.2		820.0		Corntassel Branch
4.25		816.8		818.2		820.0		
4.36		816.8		818.2		820.0		Notchy Creek
5.00		816.9		818.3		820.0		
5.58		816.9		818.3		820.0		
6.00		816.9		818.4		820.0		
6.20		816.9		818.4		820.0		
7.00		817.0		818.5		820.0		
7.33		817.1		818.6		820.0		
7.66		817.3		818.8		820.0		Ballplay Creek
7.75		817.3		818.9		820.0		
8.00		817.4		819.0		820.0		
8.81		817.6		819.3		820.0		
9.00		817.8		819.5		820.0		
9.10		817.9		819.6		820.0 - 821.0		
9.49		818.2		820.0		821.0		
9.60		818.3		820.1		821.0 - 822.0		
10.00		818.5		820.5		822.0		
10.09		818.5		820.5		822.0		
10.20		818.6		820.6		822.0 - 823.0		
10.80		818.9		821.0		823.0 - 824.0		
11.00		819.0		821.1		824.0		
11.40		819.3		821.4		824.0 - 825.0		
11.61		819.4		821.5		825.0		
12.00		819.7		821.9		825.0		
12.10		819.8		822.0		825.0 - 826.0		
12.66		820.3		822.5		826.0		
12.70		820.4		822.6		826.0 - 827.0		
13.00		820.8		823.0		827.0		
13.40		821.4		823.6		827.0 - 828.0		
13.41		821.4		823.6		828.0		
13.90		821.9		824.2		828.0 - 829.0		

Table C-6.2 Tellico River - Tellico Reservoir, Flood Profiles							
Mile		**100-Year Flood**		**Flood Risk Profile**		**TVA Structure Profile**	**Landmark**
14.00		822.0		824.4		829.0	
14.34		822.4		824.8		829.0	
14.50		822.7		825.2		829.0 - 830.0	
14.79		823.3		825.9		830.0	
15.00		823.4		826.0		830.0 - 831.0	
15.11	D	823.5		826.1		831.0	Ballplay Road
15.11	U	824.2		827.0		831.0	
15.60		825.0		827.8		831.0 - 832.0	
15.85		825.4		828.2		832.0	
16.00		825.8		828.6		832.0	
16.20		826.4		829.2		832.0 - 833.0	
16.75		827.9		830.7		833.0	
16.80		828.1		830.9		833.0 - 834.0	
17.00		828.6		831.5		834.0	
17.20		829.2		832.1		834.0 - 835.0	
17.56		830.3		833.3		835.0	
17.70		830.7		833.7		835.0 - 836.0	
18.00		831.5		834.6		836.0	
18.10		831.8		834.8		836.0 - 837.0	
18.12		831.8		834.9		837.0	Big Creek
18.19		832.0		835.1		837.0	
18.60		832.8		835.9		837.0 - 838.0	
18.83		833.2		836.3		838.0	
19.00		833.7		836.7		838.0 - 839.0	
19.50		835.0		837.9		839.0 - 840.0	
19.62		835.3		838.2		840.0	
19.80		835.9		838.8		840.0 - 841.0	
20.00		836.5		839.5		841.0	
20.22		837.2		840.2			
20.67		838.5		841.6			
21.00		839.5		842.6			
21.05		839.7		842.8			

D = Downstream at Bridge
U = Upstream at Bridge