Document Type: EA-Administrative Record Index Field: Environmental Document

Project Name: Williams Bend Island Bank Stabilization

Project Number: 2013-38

WILLIAMS BEND ISLAND BANK STABLIZATION ENVIRONMENTAL ASSESSMENT

Melton Hill Reservoir Knox County, Tennessee

Prepared by: TENNESSEE VALLEY AUTHORITY Knoxville

Cooperating Agency: U.S. Department of Army, Corps of Engineers

September 2016

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Purpose and Need for Action

TVA is proposing to place rock riprap along on the shoreline of Williams Bend Island in Melton Hill Reservoir in order to address severe erosion and undercutting of the island's shoreline. The entire island's shoreline (approximately 1,100 feet) would be stabilized with rock riprap.

TVA is responsible for the management of public shoreline in Melton Hill Reservoir and for the protection of shoreline and aquatic resources, while providing reasonable public access. The proposal is intended to minimize the destabilization and erosion of the shoreline and banks of the island and the resultant turbidity and sedimentation of reservoir waters. Erosion of the shoreline is increasing, primarily due to the increasing presence of boats producing higher wakes on the reservoir. The proposal supports and is consistent with TVA's mission of environmental stewardship, the objectives for water resource management in the TVA Natural Resources Plan (NRP, 2011), and TVA's management goals set forth in TVA's Melton Hill Reservoir Land Management Plan (RLMP) in 1999.

Proposed Action

The proposed stabilization project would consist of placing rock riprap along approximately 1,100 feet of the entire shoreline of Williams Bend Island, which is located on Melton Hill Reservoir, Clinch River Mile 35.5L, 6D, 138NW in Tennessee. Delivery and placement of the riprap would be by barge. See the attached project map (Attachment 1). Most of the shoreline of the island is approximately 6 feet high; the tallest portion of the bank is at the point of the island and is approximately 12 feet high. The banks of the island are covered with limited grass, forbs, and brush vegetation. See the attached site description (Attachment 2) and photos (Attachment 3).

Rock riprap of sufficient size (generally 15 to 20 inches in diameter) to prevent washout would be placed on the shoreline such that the bottom of the riprap would be two feet below and the top would be three feet above the normal summer operating level (795 feet mean sea level). Where needed, the bank will be graded to produce a gentler slope. A filter fabric would be laid under the entire length of riprap and anchored to the ground; anchors will be placed slightly above the riprap on the bank. See the attached project design drawings (Attachment 4). In the future, the riprap installation may periodically require routine, minor maintenance (i.e., the addition of rock riprap at locations where sloughing has occurred). TVA proposes to conduct the work in late 2016 or early 2017 and estimates that the work would be completed in less than one month.

Riprap is considered fill material and is therefore subject to Sections 401 and 404 of the Clean Water Act (CWA). Before implementing the project, TVA must obtain an Aquatic Resource Alteration Permit from the State of Tennessee, Department of Environment and Conservation (TDEC), under Section 401 of the Clean Water Act. TVA must also gain approval for the project from the U.S. Department of Army, Army Corps of Engineers (USACE), under Section 404. For this particular project, the USACE waived the 500 linear foot limit of the Nationwide Permit for Bank Stabilization (NWP-13), therefore, this project now qualifies for USACE's NWP-13, which became effective March 19, 2012. Such approval is required when the waters of the United States (U.S.) could be altered by a project. The USACE is serving as a cooperating agency in the completion of this EA.

TVA is also considering taking no action (i.e., not placing riprap along the Williams Bend Island to stabilize the streamline erosion issues). Taking no action would not address these resource

condition issues nor would it help TVA achieve its goals and objectives for managing the public shoreline. TVA also considered other stabilization methods (e.g. vegetation and bioengineering) but dismissed them from further consideration because the success of those methods in addressing critical erosion of such high banks is limited.

Environmental Impacts

TVA has reviewed the proposed project and documented potential environmental impacts related to the project in the attached Checklist (Attachment 5). The Checklist identifies the resources present in the project area and documents TVA's determination that the proposal would not significantly affect these resources.

As documented in the Checklist, the proposal would have no effect to endangered, threatened, or special status plant, aquatic, or wildlife species. TVA conducted a review of its Natural Heritage Database and found that no species were documented at or within a least a mile of the project location (see Attachment 6). No trees would be removed as part of the project, ensuring that there would be no impacts to the habitat of the Indiana bat (*Myotis sodalis*). In addition, according to the database, no sensitive aquatic or terrestrial wildlife habitats occur adjacent to or within the project area.

Impacts to cultural or wetland resources would not occur. No sensitive cultural resources are likely to occur at the project location, according to a field review by TVA staff. A review of the National Wetland Inventory database indicates that there are no wetlands at the location and there are no expected impacts to water flow or the river channel.

The 100-year floodplain may be affected, although the stabilization structure falls under the guidelines of TVA's class review of repetitive actions within the 100-year floodplain. Accordingly, there is no practicable alternative that would avoid siting riprap in the floodplain. A navigation light exists in close proximity to the island; however, navigation of the river system would not be impacted by the project. During construction, some soil erosion may occur or dredged or fill materials may be discharged and minor and temporary impacts may occur to riparian vegetation along the shoreline as the riprap is placed. However, TVA would implement standard measures and apply best management practices in implementing the project in order to minimize or mitigate potential impacts of the project. While some erosion may occur during construction, the primary beneficial effect of the project will be the long-term reduction in erosion of the island's shoreline and in sloughing of its banks. Riprap along the island's shoreline would also improve the accessibility of the island by boaters.

The parcel is not located within or adjacent to a wildlife management, park, scenic, or heritage area. However, the riprap installation would be visible to visitors of Melton Hill Park on the shoreline to the south and Clark Center Park to the northwest, as well as to boaters on the reservoir. Because there are few riprap installations in this area of the reservoir, the riprap around Williams Bend Island may noticeably contrast with the natural appearance of shorelines within view of the island. Such visual impacts would be minor however.

If TVA does not take action, the shoreline of Williams Bend Island will continue eroding and the undercutting and sloughing of banks will likely worsen. Erosion of the shoreline will continue to increase water turbidity and banks that are currently vertical or near vertical may be heightened by continued erosion. As portions of the bank slough into the reservoir, some vegetation would also become unstable and fall on to the shoreline. The portions of the shoreline that are more gently sloped may become vertical over time, with greater undercutting of the bank. Continued

erosion and degrading conditions of the shoreline (e.g., an increase of vertical banks) is expected to make access to the island more difficult for recreationists, as it likely that shoreline currently used as access points become destabilized over time.

The proposal is limited in scope and designed to improve degraded conditions along shoreline in this area of Melton Hill Reservoir. The potential adverse impacts of the project, when added to adverse impacts from other activities within the immediate area, would be insignificant. TVA regularly considers shoreline stabilization projects in Melton Hill reservoir. TVA also regularly considers proposals by property owners on the reservoir for minor structures or docks which may include the installation of riprap to stabilize the shoreline along the property. Cumulatively, these stabilization projects would change the character of small portions of the reservoir's shoreline but would have beneficial overall impacts – though very diffuse in reach – because of decreased erosion and water turbidity and improved recreational access. The cumulative impacts associated with these stabilization projects have also been described in the environmental review of the NRP and RLMP.

Agencies and Persons Consulted

Authorization to begin work is dependent on TVA obtaining the necessary permits. Because this project involves alteration of waters of the U.S., TVA requires a permit from TDEC under Section 401 of the Clean Water Act before implementing the proposal. USACE has expressed no concerns and identified no conflicts with the proposal and waived the limits of the NWP-13. TVA will secure a permit from TDEC and will notify USACE at least two weeks prior to start of work so that USACE can issue a Notice to Navigation Interests.

TVA Preparers

Angela Sutton – Land Use and Watershed Specialist Tim Pruitt – Heritage Review and Watershed Specialist Marianne Shuler – Archaeologist Mark Lowe – Navigation Review Matthew Higdon – NEPA Specialist

List of Attachments

Attachment 1 - Project Map

Attachment 2 - Site Information Form

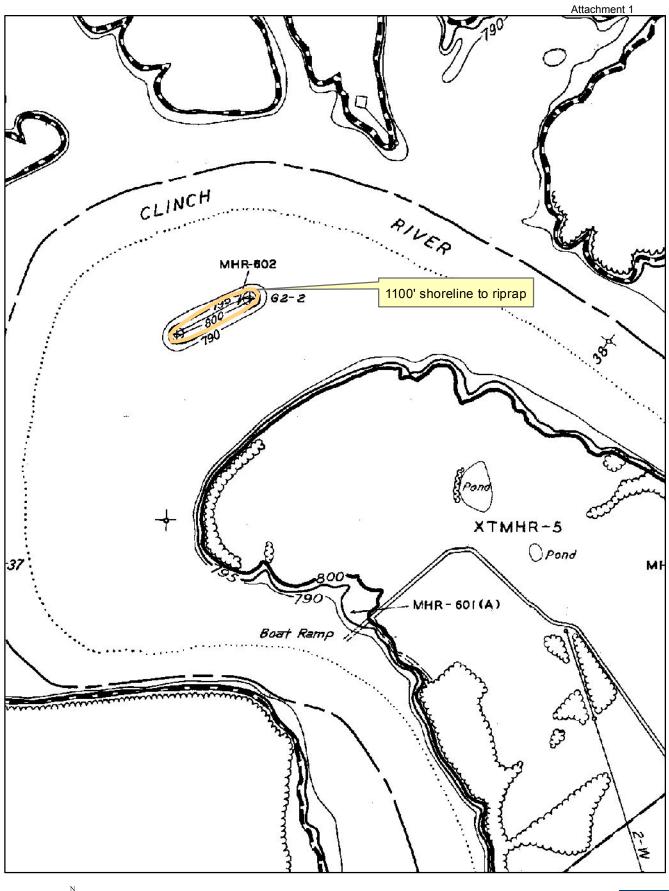
Attachment 3 - Site Photographs

Attachment 4 - Project Drawings

Attachment 5 - Environmental Review Checklist

Attachment 6 - TVA Natural Heritage Database Query

ATTACHMENTS





975

1,300

Feet

650

0 162.5325

RLR TVA - Williams Bend Island Bank Stabilization Project MHR-602 Melton Hill Reservoir Clinch River 35.5L



Map Reference: D Stage - 6 Topo - 138 NW

SITE INFORMATION CHECKLIST

Section 26a and Land Use

Applicant				
TVA		TVA Tract No. MHR-602	RLR No.	
Inspected By	Inspection Date	Project Description		
AMS	01/29/2013	Barge placement of riprap	for stabilization	
☐ 26a Category I	☑ 26a Category II	☐ 26a Category III	☐ Land Use	☐ Other
LOCATION (Section 26a re	eviews only)			
1. Will the proposed facility	(ies) be?	reservoir or regulated strea		
2. Will the proposed facility	•	reservoir or regulated stream	п	
		ent plan (VMP) not required	▼ TVA-owned land - V	MP required
use pre-SMP vegetation	ement Policy (SMP) on management guide	subdivision - Pre-SMP Waivelines or document current press apply (for TVA-owned land:	actices)	
SITE DATA (Section 26a re	eviews only)			
4. What is the Residential S	•			
green (CEC not requir	·	☐ yellow ☐ red	□ N/A	
		ndicate potential (red) to aff		
6. Did the ALIS Heritage SN	/II Database* indicat	te potential to affect protect	ed species? Yes	No
7. Did the ALIS Wetlands S	MI Database* indica	ate potential to affect wetlan	ds? 🗌 Yes 🗌 No	
* Database to be developed from	existing SMI data.			
SITE COMPATIBILITY (S	ection 26a reviews	only)		
8. Will the proposed facility	(ies) extend beyond	d 1/3 of the cove or slough?		
· · · · · · · · · · · · · · · · · · ·	•			
☐ Yes - refer to Prescree	•			
	ening Criteria Checkli art of the reservoir	st No so that the proposed facility	may affect existing facili	ties?
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SI	TE INFORMATION OBSERVATIONS - Continued
14.	Shoreline erosion: none (stabilized, rock outcrop, bluff) minimal (adequate vegetative cover, grass/shrub cover) moderate (<2' vertical bank and/or limited vegetative cover) severe (>2' vertical bank and/or limited vegetative cover, bank sloughing, rills and gullies)
15.	Manmade shoreline features: ☐ riprap ☐ seawall ☐ other
16.	Typography / percent (%) slope: ☑ gentle / (0-5%) ☐ medium / (6-20%) ☐ steep / (>20%)
17.	What is the visible soil type or parent material at or below pool? ☐ sand ☐ silt ☐ rubble or cobblestones ☐ clay ☐ gravel ☐ bed rock (solid rock underlying surface material)
18. 	Indicate vegetation cover on TVA property: (Choose S = at shoreline, B = at backlying TVA property, or S&B = at shoreline and backlying TVA property) bare soilhardwood/grasslawn/maintained fieldpine/undercoverhardwood/undercovershrub/grassline/cedartrees fallen into watershrub/brushpine/hardwood
	ESOURCE INDICATOR OBSERVATIONS Are any of the following indicated?
20.	□ streams □ several submerged stumps □ springs/seeps □ fish attractor (brush pile) Are any of the following observed? □ caves (endangered bats, etc.) □ nests greater than 3' in diameter or several large nests (eagle, osprey)
21.	Are any of the following conditions present? — emergent wetland (cattail, bulrush; i.e., plants in the water along water's edge) — scrub/shrub wetland (buttonbush, black willow, river alder, silky dogwood; i.e., bushes along water's edge) — aquatic bed wetland (water milfoil, naiads, pondweeds; i.e., plants in the water) — forested wetland (willow, sycamore, silver maple, river birch; i.e., trees along shore)
22.	Are any of the following observed or on acquisition map? (Include submerged features) (Provide copy of the appropriate portion of the acquisition map to reviewers) spring house foundation barn roadbed(s) sinkhole(s) orchard outhouse pump house other
	Are any structures 50 years old or older present or visible from impact area? Yes No
24.	Are any archaeological materials observed? (Such as flint chips, pot shards, bones, old mussel shells, bricks, etc.) Yes No
Note	es: Bank is approx 6', ranges up to 12' high on point of island.



Williams Bend Island Left descending bank



Downstream area, left descending bank



Mid-island, left descending bank



Upstream area, left descending bank



Upstream area, right descending bank (channel side)



Mid-island, right descending bank



Downstream area, right descending bank

NOTE: INCLUDE ALL DIMENSIONS AND ELEVATIONS WHERE INDICATED WOODY/ HERBACEOUS RIPARIAN PLANTING ROCK RIPRAP SHORELINE TO BE SHORELINE TO BE STABILIZED STABILIZED PLAN SHOWING PLAN SHOWING **EXISTING SHORELINE** STABILIZED SHORELINE NORMAL SUMMER OPERATING LEVEL EI EXISTING TREES **SECTION SHOWING EXISTING SHORELINE** WOODY/HERBACEOUS TOP OF ROCK RIPRAP RIPARIAN PLANTING ROCK RIPRAP OF SUFFICIENT SIZE TO PREVENT WASHOUT ANCHOR FILTER FABRIC WITH WIRE PINS OR WOODEN STAKES TO HOLD FABRIC IN PLACE NORMAL SUMMER OPERATING LEVEL EL. ___ 2:1 OR 3:1 SLOPE APPROX. SIZE OF ROCK RIPRAP ______INCH DIA. BOTTOM OF RIPRAP -FILTER FABRIC EARTHEN KEY FOR ROCK RIPRAP SECTION SHOWING STABILIZED SHORELINE ROCK RIPRAP w/ OPTIONAL VEGETATION PROJECT LOCATION INFORMATION: APPLICANT_ RESERVOIR_ TRACT NUMBER _____ SUBDIVISION _____ LOT NO. _____MAP NO. _ RIVER _ ____RIVER MILE_

Categorical Exclusion Checklist for Proposed TVA Actions

Categorical Exclusion Number Claimed	Organization ID Number RLR236692			Tracking Number (NEPA Administration Use C 28965		oer (NEPA Administration Use Only)
Form Preparer Angela M Sutton	Project Initiator/Manager Angela M Sutton				Business Unit P&NR - Reservoir Property & Resource Mgmt	
Project Title 26a Category 2 RLR 236692 Angela Sutton Tennessee Valley Authority Melton Hill Res				ir - V	Villiams	Hydrologic Unit Code
Description of Proposed Action (Include Ar For Proposed Action See Attachments and	•	s of Implementation)	X Co	ontin	nued on Page	3 (if more than one line)
Initiating TVA Facility or Office Eastern Region			TV	TVA Business Units Involved in Project		
Location (City, County, State) KNOX, TN, County, State: KNOX, TN Map Sheet(s): 138 NW Quad Sheet 6 C/D Stage S					m(s): Clinch R	: 35.50 L

Parts 1 through 4 verify that there are no extraordinary circumstances associated with this action:

Part 1. Project Characteristics

Is th	ere evidence that the proposed action	No	Yes	Information Source for Insignificience
	1.ls major in scope?	Х		NOA, Sutton, Angela M. 08/21/2013
	2.Is part of a larger project proposal involving other TVA actions or other federal agencies?	Х		NOA, Sutton, Angela M. 08/21/2013
*	3.Involves non-routine mitigation to avoid adverse impacts?	Х		NOA, Sutton, Angela M. 08/21/2013
	4.Is opposed by another federal, state, or local government agency?	Х		Sutton, Angela M. 09/13/2013
*	5.Has environmental effects which are controversial?	Х		NOA, Sutton, Angela M. 08/21/2013
*	6.Is one of many actions that will affect the same resources?		Х	For comments see attachments
	7.Involves more than minor amount of land?	Х		NOA, Sutton, Angela M. 08/21/2013

^{*}If "yes" is marked for any of the above boxes, consult with NEPA Administration on the suitability of this project for a categorical exclusion.

Part 2. Natural and Cultural Features Affected

Would the proposed action	No	Yes	Per-mit	Commit- ment	Information Source for Insignificience
1.Potentially affect endangered, threatened, or special status species?	Х		No	No	For comments see attachments
2.Potentially affect historic structures, historic sites, Native American religious or cultural properties, or archaeological sites?	Х		No	No	For comments see attachments
3.Potentially take prime or unique farmland out of production?	Х		No	No	NOA, Sutton, Angela M. 08/21/2013
4.Potentially affect Wild and Scenic Rivers or their tributaries?	Х		No	No	Sutton, Angela M. 09/13/2013
5.Potentially affect a stream on the Nationwide Rivers Inventory?	Х		No	No	Sutton, Angela M. 09/13/2013
6.Potentially affect wetlands, water flow, or stream channels?	Х		No	No	For comments see attachments
7.Potentially affect the 100-year floodplain?		Х	No	No	For comments see attachments
8.Potentially affect ecologically critical areas, federal, state, or local park lands, national or state forests, wilderness areas, scenic areas, wildlife management areas, recreational areas, greenways, or trails?	Х		No	No	For comments see attachments
9.Contribute to the spread of exotic or invasive species?	Х		No	No	For comments see attachments
10.Potentially affect migratory bird populations?	Х		No	No	For comments see attachments
11.Involve water withdrawal of a magnitude that may affect aquatic life or involve interbasin transfer of water?	Х		No	No	NOA, Sutton, Angela M. 08/21/2013
12.Potentially affect surface water?	Х		No	No	Sutton, Angela M. 09/13/2013
13.Potentially affect drinking water supply?	Х		No	No	NOA, Sutton, Angela M. 08/21/2013
14.Potentially affect groundwater?	Х		No	No	NOA, Sutton, Angela M. 08/21/2013
15.Potentially affect unique or important terrestrial habitat?	Х		No	No	For comments see attachments
16.Potentially affect unique or important aquatic habitat?	Х		No	No	For comments see attachments

Part 3. Potential Pollutant Generation

Would the proposed action potentially (including accidental or unplanned)	No	Yes	Per-mit	Commit- ment	Information Source for Insignificience
1.Release air pollutants?	Х		No	No	CBC, Sutton, Angela M. 08/21/2013
2.Generate water pollutants?	Х		No	No	CBC, Sutton, Angela M. 08/21/2013
3.Generate wastewater streams?	Х		No	No	CBC, Sutton, Angela M. 08/21/2013
4.Cause soil erosion?		Х	No	No	For comments see attachments
5.Discharge dredged or fill materials?		Х	No	No	For comments see attachments
6.Generate large amounts of solid waste or waste not ordinarily generated?	Х		No	No	CBC, Sutton, Angela M. 08/21/2013
7.Generate or release hazardous waste (RCRA)?	Х		No	No	CBC, Sutton, Angela M. 08/21/2013
8.Generate or release universal or special waste, or used oil?	Х		No	No	CBC, Sutton, Angela M. 08/21/2013
9.Generate or release toxic substances (CERCLA, TSCA)?	Х		No	No	CBC, Sutton, Angela M. 08/21/2013
10.Involve materials such as PCBs, solvents, asbestos, sandblasting material, mercury, lead, or paints?	Х		No	No	CBC, Sutton, Angela M. 08/21/2013
11.Involve disturbance of pre-existing contamination?	Х		No	No	Sutton, Angela M. 09/13/2013
12.Generate noise levels with off-site impacts?	Х		No	No	CBC, Sutton, Angela M. 08/21/2013
13.Generate odor with off-site impacts?	Х		No	No	CBC, Sutton, Angela M. 08/21/2013
14.Produce light which causes disturbance?	Х		No	No	CBC, Sutton, Angela M. 08/21/2013
15.Release of radioactive materials?	Х		No	No	CBC, Sutton, Angela M. 08/21/2013
16.Involve underground or above-ground storage tanks or bulk storage?	Х		No	No	CBC, Sutton, Angela M. 08/21/2013
17.Involve materials that require special handling?	Х		No	No	CBC, Sutton, Angela M. 08/21/2013

Part 4. Social and Economic Effects

Vould the proposed action	No	Yes	Commit- ment	Information Source for Insignificience
1.Potentially cause public health effects?	Х		No	NOA, Sutton, Angela M. 08/21/2013
2.Increase the potential for accidents affecting the public?	Х		No	NOA, Sutton, Angela M. 08/21/2013
3.Cause the displacement or relocation of businesses, residences, cemeteries, or farms?	Х		No	NOA, Sutton, Angela M. 08/21/2013
4.Contrast with existing land use, or potentially affect resources described as unique or significant in a federal, state, or local plan?	Х		No	Sutton, Angela M. 09/13/2013
5.Disproportionately affect minority or low-income populations?	Х		No	NOA, Sutton, Angela M. 08/21/2013
6.Involve genetically engineered organisms or materials?	Х		No	NOA, Sutton, Angela M. 08/21/2013
7.Produce visual contrast or visual discord?	Х		No	Sutton, Angela M. 09/13/2013
8.Potentially interfere with recreational or educational uses?	Х		No	Sutton, Angela M. 09/13/2013
9.Potentially interfere with river or other navigation?		Х	No	For comments see attachments
10.Potentially generate highway or railroad traffic problems?	Х		No	NOA, Sutton, Angela M. 08/21/2013

Part 5. Other Environmental Compliance/Reporting Issues

Would the proposed action	No	Yes	Commit- ment	Information Source for Insignificience
Release or otherwise use substances on the Toxic Release Inventory list?	Х		No	NOA, Sutton, Angela M. 08/21/2013
2.Involve a structure taller than 200 feet above ground level?	Х		No	NOA, Sutton, Angela M. 08/21/2013
3.Involve site-specific chemical traffic control?	Х		No	NOA, Sutton, Angela M. 08/21/2013
4.Require a site-specific emergency notification process?	Х		No	NOA, Sutton, Angela M. 08/21/2013
5.Cause a modification to equipment with an environmental permit?	Х		No	NOA, Sutton, Angela M. 08/21/2013
6.Potentially impact operation of the river system or require special water elevations or flow conditions??	Х		No	Sutton, Angela M. 09/13/2013
7.Involve construction of a new building or renovation of existing building (i.e., major changes to lighting, HVAC, and/or structural elements of building of 2000 sq. ft or more) on which TVA will pay/pays the utilities??	Х		No	Sutton, Angela M. 09/13/2013

commitments v		ection following this form why the effect is insignificant. Attach any conditions or outine commitments to avoid significance is an indication that consultation with
An □ EA or	☐ EIS Will be prepared.	
Based upon my	y review of environmental impacts, the discussion at	ttached, and/or consultations with NEPA Administration, I have determined
that the above a	action does not have a significant impact on the qua	lity of the human environment and that no extraordinary circumstances exist.
Therefore, this	proposal qualifies for a categorical exclusion under	Section 5.2. of TVA NEPA Procedures.
Project Initiator, Angela M Sutto	· ·	Date 09/13/2013
TVA Organizati	ion E-mail	Telephone
OER	ampolly@	@tva.gov
	Site Environmental Compliance Reviewer	Final Review/Closure
	Signature	Signature
	eview Signatures (as required by your organization	n)
Garry E C	Chappelle 09/16/2013 Signature	Cimpotium
	Signature	Signature
	Signature	Signature
	Signature	Signature
Project T	nents/References itle Continued from Page 1 gory 2 RLR 236692 Angela Sutton Tennessee Valle	ey Authority Melton Hill Reservoir - Williams Bend Island
Description Applicant shoreline		60 Interchange Park Drive Lenoir City TN 37772 Stabilize 1,100' eroding
CEC Gene	eral Comment Listing	
1.	NO COMMENT TEXT	
2.	By: 26a Added Comment NO COMMENT TEXT	
3.	By: 26a Added Comment NO COMMENT TEXT	

4.

5.

6.

7.

8.

By: 26a Added Comment NO COMMENT TEXT

By: 26a Added Comment

By: 26a Added Comment NO COMMENT TEXT

By: 26a Added Comment

NO COMMENT TEXT

NO COMMENT TEXT By: 26a Added Comment NO COMMENT TEXT By: 26a Added Comment

- NO COMMENT TEXT 9.
 - By: 26a Added Comment
- Email from environmental scientist informing that this action may be elevated to an EA 10

By: 26a Added Comment

In the Information Source columns associated with the checklist questions, NOA refers to Nature of Action and CBC refers to 11. Cleared By Criteria. These criteria are described in the Resource Stewardship Prescreening Criteria Checklist Instructions.

By: Angela M Sutton 08/21/2013

CEC Comment Listing

Part 1 Comments

Addresses in Shoreline Management Initiative Environmental Impact Statem 6.

By: Angela M Sutton 08/21/2013

Part 2 Comments

Species list for normal 3, 5, 10 mile search radii and an additional 10 for terrestrial species only in 1. search of Indiana Bats. See comments.

> By: Tim D Pruitt 09/09/2013

Files: 236692-TVA-Williams Island_Results_table.pdf 09/09/2013 128.79 Bytes

Myotis sodalis (Indiana bat) is listed as a federally endangered species for this area. Myotis sodalis 1. hibernates in caves; this species migrates from caves to roosts during the summer behind loose bark of dead or dying trees or in tree cavities. This includes both individual bats and maternity colonies. Due to current concerns over the status of the Indiana Bat population in the U.S. an additional search radius of 10 miles was performed for this species only. No Indiana bats were recorded within 10 miles of this project site. Therefore, TVA has determined that there would be no effects to this species and I concur with approval of this project.

By: Tim D Pruitt

A review of the ALIS Heritage data base, the SIC, and site photos was conducted. Please see attached 1. Spread Sheet for detailed list of species.

> Aquatic Animals; Within the required 10 mile search radius EORs for 15 fish and mollusk species were recorded. These records show that many of these species were likely located there historically but are now considered extirpated from the reservoir areas. Where these species are extant it is the more riverine sections of the reservoir, the reservoir tail waters, or smaller tributary streams nearby, reflecting the locations where appropriate habitat exists for these fish to survive and reproduce. There will be no impacts from this action.

> Plants and Champion Trees: Within a 5 mile search radius EORs occurred for 18 state listed plant species. The various species commonly found on in this area have State rankings ranging from Special Concern (SPCO), Commercially Exploited (S-CE), Threatened (T or THE) and Endangered (E or END). None of these EORs occur within the immediate vicinity of this site. Many of the noted EORs are located on tracts of TVA property not subject to development, Habitat protection areas, and the majority of them located on the DOE Oak Ridge Reservation where they have been given an extra level of protection since that area was established. There will be no impacts from this action.

> Terrestrial Animals, Wading Bird Colonies (Heronies) and Caves: Within a 3 mile search radius of the project site EORs occurred for 6 animal species/nesting sites and 4 for cave. The EOR for Gray Bat was not in the immediate vicinity. None of these caves are in the immediate vicinity of this site and none are listed as significant to bat habitat. Due to the normal activity already occurring nearby, the readily available habitat in the surrounding area for any of the recorded species, and the limited actions of this request there will be no impacts.

I concur with approval.

By: Tim D Pruitt 09/09/2013

2. A field review was conducted on 04-04-13. Although one archaeological site (40KN29) was originally mapped in the location of the permitting area, only a spare amount of cultural material (three flakes) was noted along the shoreline in this area. Based on examination of pre-inundation maps for the area, it is likely that site 40KN29 is located ca. 100 meters to the northwest of the permit area and will not be affected by the planned action. No historic properties will be affected. We concur with approval. By: Marianne M Shuler 09/11/2013

6. Review of the ALIS Heritage Wetland data base, the site photos and the SIC reveals no wetlands in this area. Therefore no wetland impacts will occur if permitted. I concur with approval. By: Tim D Pruitt 09/09/2013

7. This permitted facility will fall under the guidelines of TVA's class review of repetitive actions within the 100-year floodplain.

By: Ángela M Sutton

8. Based on a review of the ALIS Heritage data base data there will be no affects on ecologically critical areas, federal, state, or local park lands, national or state forests, wilderness areas, scenic areas, wildlife management areas, recreational areas, greenways, or trails. I concur with approval. By: Tim D Pruitt 09/09/2013

EA - Attachment 5

This action will not contribute to the spread of exotic or invasive species. I concur with approval. 9.

> By: Tim D Pruitt 09/09/2013

This action will not potentially affect migratory bird populations. I concur with approval. 10.

> By: Tim D Pruitt 09/09/2013

This action will not potentially affect unique or important terrestrial habitat, see response for Question 1 15.

above. I concur with approval.

By: Tim D Pruitt 09/09/2013

This action will not potentially affect unique or important aquatic habitat, see response for Question 1 above. I concur with approval. 16.

By: Tim D Pruitt 09/09/2013

Part 3 Comments

Insignificant with implementation of General and Standard Conditions in 4.

cluding BMPs

By: Angela M Sutton 08/21/2013

Riprap is considered to be fill material. 5.

> By: Angela M Sutton 09/13/2013

Part 4 Comments

9. Please see attached Navigation comments.

> By: Mark C Lowe 08/22/2013

12.80 Bytes Files: 236692mhh - 26a - Clinch River Mile 33.5L- TVA.docx 08/22/2013

CEC Permit Listing

CEC Commitment Listing

