

**FINDING OF NO SIGNIFICANT IMPACT**  
**TENNESSEE VALLEY AUTHORITY**  
**DUCK RIVER BANK RIVER MILE 176.8 STABILIZATION ENVIRONMENTAL ASSESSMENT**

The Tennessee Valley Authority (TVA), acting as an agent of the United States of America, proposes to enter into a partnership with the Nature Conservancy (TNC) and the U.S. Department of Agriculture's Natural Resources Conservation Services (NRCS), and Ms. Debra Allen (land owner) to stabilize 74 feet of eroding river bank of the Duck River near Lewisburg, Tennessee (Marshall County), River Mile (RM) 176.8. This partnership project would be jointly funded by TVA, TNC, and NRCS and was designed by the NRCS. Additionally, the proposed action is subject to approval by TVA pursuant to Section 26a of the TVA Act, therefore TVA is also proposing to issue approval for the proposed stabilization project.

The proposed action is the subject of an environmental assessment (EA) prepared by TVA. The EA is incorporated by reference.

Two viable alternatives were available for consideration in the EA, the No Action Alternative and the Proposed Action Alternative. Under the No Action Alternative, the requested approval would not be issued and TVA would not fund the project. Riverbank erosion, gully erosion and stormwater runoff from upland areas would continue to impact aquatic habitat and aquatic species in the Duck River. Under this alternative, the needs of the applicant and the objectives of TVA, NRCS, and TNC would not be met. 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.

Under the Action Alternative (the preferred alternative), a total of 74 feet of river bank in three sections of river bank (28 feet, 25 feet, and 21 feet) would be stabilized. Development of the site would include bank shaping and stabilization with riprap to prevent further erosion of river bank sites. Bare root shrub seedlings, Virginia wild rye and other native grasses would be seeded inside a heavy grass mat to reduce sheet erosion.

### **Impacts Assessment**

Based on the analyses in the EA, TVA has concluded that implementation of the Action Alternative would result in no impacts to land use, wetlands, cultural resources, threatened and endangered plant species, recreation or navigation.

Implementation of the Action Alternative, when implemented with the identified conditions and mitigation measures, would result in minor or insignificant impacts to aquatic ecology, floodplains, wildlife and aquatic threatened and endangered species, and water quality. The erosion of the three river bank sites has been severe in the past year due to heavy rains, runoff, and lack of vegetation. The project would improve the water quality of the Duck River Watershed, one of the most vulnerable watersheds in the Tennessee River watershed, and would be consistent with TVA's policies and goals for environmental stewardship. The proposal also supports and is consistent with TVA's mission of environmental stewardship, the objectives for water resource management in the TVA Natural Resources Plan (2011).

The proposed stabilization and associated actions would alter the existing natural environment within and near the site. Heavy construction equipment such as dump trucks, a bulldozer, and a track hoe would be used to complete the project. Potential direct and indirect impacts to water quality, aquatic resources, and terrestrial habitats will be short-term and minor. Potential, long-term benefits of the proposed project would be improved river bank stability and a reduction in erosion of soils and sediments from upland areas.

Due to the presence of threatened or endangered aquatic species in the vicinity of the project and the potential for impacts to these species, TVA initiated formal consultation with the U.S. Fish and Wildlife Service (USFWS) in compliance with Section 7 of the Endangered Species Act (ESA). In its Biological Opinion (BO), USFWS determined that the project may adversely affect the oyster mussel, Cumberland monkeyface, birdwing pearlymussel, slabside pearlymussel and rabbitsfoot, and designated critical habitat (DCH) for the oyster mussel, slabside pearlymussel, Cumberlandian combshell and fluted kidneyshell. The BO included an Incidental Take Statement permitting take for each species; as well as non-discretionary Terms and Conditions designed to protect the mussels and critical habitat from potentially adverse effects by the proposed project. With the implementation of the Terms and Conditions outlined in the BO, the USFWS concluded that the proposed action is not likely to jeopardize the continued existence of the oyster mussel, Cumberland monkeyface, birdwing pearlymussel, slabside pearlymussel and rabbitsfoot, and is not likely to destroy or adversely modify DCH for the oyster mussel, slabside pearlymussel, Cumberlandian combshell and fluted kidneyshell.

The EA addresses the potential soil erosion or discharge of dredged or fill materials from project actions. Standard conditions and best management practices will be applied to minimize or mitigate impacts. After construction, the project will result in a more stabilized streambank, reducing erosion of the bank and improving habitat for sensitive aquatic species in the river.

The project will require permits from TVA and the U.S. Army Corps of Engineers (USACE) and permitting actions by federal agencies are subject to the requirements of the National Environmental Policy Act (NEPA). This environmental assessment was prepared by TVA to meet NEPA requirements. The NRCS, as a project partner, is conducting an independent environmental review of the project.

### **Mitigation and Standard Conditions**

TVA will require the applicant to implement routine environmental measures such as standard best management practices during the implementation of the proposed stabilization. In addition, the project will be implemented in accordance with NRCS Streambank and Shoreline protection code 580.

TVA, as lead agency, would adhere to the following commitments outlined in the BO to reduce potential effects of the proposed project on the listed mussel species and their designated critical habitat.

- *Translocation:* TVA, USFWS, and TWRA personnel would conduct pre-project translocations of the adjacent and downstream impact areas to move individuals of listed species (oyster mussel [Duck River dartersnapper], birdwing pearlymussel, slabside pearlymussel, Cumberland monkeyface, and rabbitsfoot mussels) out of areas directly impacted by the project. Collection and relocation of individuals would most likely take place in the late summer of 2015, though the exact timeframe would be dictated by project implementation schedules. Individuals collected would be released at appropriate habitats suitable for mussel survival upstream of the project area. Any federally protected mussels collected for relocation would be carefully maintained during collection, transported as quickly as possible to relocation sites, and acclimated to the new environment appropriately. The catch per unit effort and/or density of individuals collected

would be documented and the deposition of relocated species would be reported to the USFWS Tennessee Field Office. Details reported would include habitat conditions such as water temperature, depth, substrate types and percentages, flow at substrate, number of individuals collected and moved, and location (latitude and longitude) of pre-approved release sites. In the event that dead, injured, or sick individuals of an endangered or threatened species is identified, the USFWS would be notified, and care would be taken in handling sick or injured individuals and in preserving specimens for later analysis of cause of death or injury.

- An NRCS representative as well as a TVA biologist would make at least one site visit during active construction to ensure that BMPs and water quality control measures are in place and properly functioning.
- An onsite inspection would be completed by this individual and findings made available to the Tennessee USFWS field office and/or permitting agency(s) upon request.
- A properly designed and designated fueling and oil area for equipment an adequate distance from the channel would be established to ensure that oil, gas, or other petroleum pollutants do not enter the Duck River.
- Any construction activity that results in the introduction of potentially toxic materials into the Duck River would be stopped immediately by the project inspector, resource agencies contacted, and corrective action(s) implemented prior to resuming work.
- There would be no tree or shrub removal along the Duck River except within project limits, and then only if essential. When possible, trees and shrubs on streambanks would be cleared by hand rather than removed by mechanical means to ensure the roots are left in place. All areas disturbed during construction would be stabilized as soon as possible by use of riprap, seeding, or mulching, in compliance with permit specifications.

## Conclusion and Findings

Based on the findings listed above and the analyses in the EA, TVA concludes that implementing the river bank stabilization on the Duck River at RM 176.8 would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required.



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Date Signed