

## REVISED FINDING OF NO SIGNIFICANT IMPACT TENNESSEE VALLEY AUTHORITY

WILSON DAM BASCULE BRIDGE REPLACEMENT, COLBERT AND LAUDERDALE COUNTIES, ALABAMA

The Tennessee Valley Authority (TVA) proposes to retire the bascule bridge spanning the auxiliary lock at Wilson Dam to provide safe and efficient operation of the dam and the navigation locks. Retirement of the bridge would eliminate the need to maintain the bridge's deteriorating operating mechanism and the need to raise the bridge when the auxiliary lock is in service. The bascule bridge cannot be extended to its designed upright position and presents an obstacle to large navigation traffic. The decisions before TVA are whether to retire the bascule bridge, including possible removal of the bridge, and the disposition of the bridge if it is to be removed.

In 2008, TVA, in cooperation with the U.S. Army Corps of Engineers, prepared an environmental assessment (EA) entitled *Wilson Dam Bascule Bridge Replacement, Colbert and Lauderdale Counties, Alabama*. That document addressed the potential environmental effects of constructing a new access bridge at Wilson Dam. However, because plans for the disposition of the bascule bridge were not in place at that time, removal of the bascule bridge was not addressed in detail in that document. Options for the retirement and disposal of the bascule bridge are the subject of a supplemental environmental assessment (SEA) prepared by TVA, which is incorporated by reference. The SEA tiers from the 2008 EA.

Four alternatives were considered. Under Alternatives A and B, the bascule bridge would remain affixed in its current location on Wilson Dam. Under Alternatives C and D, the bascule bridge would be removed from the dam. The alternatives are summarized below.

- **Alternative A - No Action.** TVA would leave the bascule bridge in place and continue to operate it as needed.
- **Alternative B - Permanently Fix the Bascule Bridge in an Upright Position.** TVA would leave the bascule bridge in place but raise the bridge to an upright position of 76 degrees. This would require repairs to the operating gear system. Also, modifications to the lock wall and bridge mountings would be necessary to ensure that the bridge could be supported securely.
- **Alternative C - Remove the Bascule Bridge for Relocation or Interpretation.** TVA would remove the bascule bridge and most or all of the associated mechanisms. The bridge would be disassembled, cut into sections, and moved to another location. Most or all of the bridge would be reassembled and placed on display with appropriate signage that describes the bridge and its function.
- **Alternative D - Remove and Dispose of the Bascule Bridge.** TVA would disassemble the bridge and cut it into smaller sections for offsite transport by barge. Certain portions of the bridge structure would be donated to Purdue University for research purposes. The remainder of the metallic portions of the bridge would be recycled. These actions would be undertaken in accordance with the stipulations of a Memorandum of Agreement (MOA) between TVA and the Alabama State Historic Preservation Officer (SHPO).

Alternative D is the preferred alternative and the action which TVA proposes to undertake. Removal and disposal of the bascule bridge under Alternative D would not affect local land use or floodplain values. No wetlands or their functions would be affected. Removal of the bridge would improve navigation conditions through the auxiliary lock and the overall safety of dam operations. Implementation of the proposed action would have insignificant effects to the local visual character, water quality, and nearby managed areas. No effects are anticipated to terrestrial and aquatic life, including endangered or threatened species or their habitats.

The bascule bridge weighs approximately 500 tons, and is almost completely metal. With the exception of the structural material donated to Purdue University, all metal would be recycled. Thus, removal of the bridge would not produce any significant amount of solid waste requiring disposal in a landfill. Implementation of the stipulations of the MOA would adequately mitigate the potential adverse effects to Wilson Dam, a National Historic Landmark, and satisfy TVA's responsibilities under Section 106 of the National Historic Preservation Act.

### **Mitigation**

The routine environmental protection measures listed in the 2008 EA would remain in effect. These include use of appropriate best management practices to avoid adverse effects to aquatic life, implementation of measures to prevent and contain spills and the discharge of pollutants or surface runoff into the reservoir, and the proper disposal of all wastes.

As a non-routine measure, TVA would undertake the proposed action in accordance with the following stipulations of the MOA between TVA and the Alabama State Historic Preservation Officer effective April 17, 2012.

1. DOCUMENTATION OF THE BASCULE BRIDGE AT TVA'S WILSON DAM  
TVA shall provide copies of the original design/construction drawings of the Wilson Bascule Bridge and operating mechanism, in addition to historic and current photographs of the bascule bridge and operating mechanism. TVA shall provide one (1) hard copy and one (1) archival grade CD/DVD of the documentation to the University of North Alabama Special Collections department for curation. TVA shall complete the tasks associated with Stipulation 1 prior to the removal of the bascule bridge.
2. RETENTION OF PORTIONS OF THE BASCULE BRIDGE GIRDER AND BEAM MEMBERS FOR RESEARCH  
TVA shall retain one (1) 20'-30' section of the main girder and two (2) full sections of floor beams for donation to Purdue University for the purpose of research on the failure mechanisms of built up girder (beam) members. TVA shall complete the tasks associated with Stipulation 2 prior to the disposal of materials from the bascule bridge removal.
3. CHANGES IN PROJECT SCOPE  
Should TVA change the project scope subsequent to the execution of this MOA, TVA, in consultation with the Alabama SHPO, will assess the APE and revise if applicable, identify and evaluate any new historic properties within that revised APE (or properties not otherwise addressed under this MOA), and further consult with Alabama SHPO to assess project related effects to any historic properties determined eligible for listing in the NRHP and to resolve any adverse effect.

**Conclusion and Findings**

Based on the findings listed above and the analyses in the EA, we conclude that the proposed action of removing and disposing of the bascule bridge at Wilson Dam under Alternative D would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required. This finding of no significant impact is contingent upon adherence to the mitigation measures described above.



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Date Signed