Document Type: EA-Administrative Record
Index Field: Finding of No Significant Impact (FONSI)
Project Name: Seven Islands Bridge
Project Number: 2007-30

FINDING OF NO SIGNIFICANT IMPACT

TENNESSEE VALLEY AUTHORITY

REQUEST FOR SECTION 26A APPROVAL FOR A PEDESTRIAN BRIDGE AT SEVEN ISLANDS WILDLIFE REFUGE, FRENCH BROAD RIVER MILE 15.6, KNOX COUNTY, TENNESSEE

Proposed Action and Need

The Seven Islands Wildlife Refuge, a 360-acre wildlife sanctuary near Knoxville, Tennessee, is operated jointly by Knox County and the Seven Islands Foundation. The refuge is adjacent to the Seven Islands complex in the French Broad River. Knox County proposes to construct a pedestrian bridge across the French Broad River at river mile 15.6 to connect the main portion of the refuge, which lies on the east side of the river, with a portion on the west bank. The proposed pedestrian bridge would provide visitors access to both parts of the refuge. Normal driving time between the two portions of the refuge is 45 minutes or more. Knox County has requested approval for the bridge from the Tennessee Valley Authority (TVA) under Section 26a of the TVA Act. Thus, the decision before TVA is whether to issue Section 26a approval for the proposed pedestrian bridge at French Broad River Mile 15.6.

Alternatives

Three feasible alternatives concerning the proposed bridge were evaluated in a draft environmental assessment (EA), which TVA issued in October 2007. An additional alternative, Alternative D, involving the construction of a suspension bridge was developed and considered in the final EA. A summary of these alternatives is provided below. The final EA is attached and incorporated by reference.

Alternative A - The No Action Alternative. Under the No Action Alternative, TVA would not issue Section 26a approval. Consequently, the county would likely not build the proposed pedestrian bridge.

Alternative B - Issue Section 26a Approval for Construction of the Pedestrian Bridge Using Barges and Mats. Under this action alternative, TVA would issue Section 26a approval for a pedestrian bridge. The proposed bridge would have a bank-to-bank distance of approximately 950 feet. Nine concrete piers would be placed in the river, along with two piers on each bank and two bridge abutments. The bridge would span the upstream tip of the Seven Islands complex. The bridge deck would be 10 feet wide and would afford an 8.5-foot clearance at river elevation 848 feet. The bases of the piers would be 9-foot long by 5-foot wide ovals, and these would be anchored six feet into the riverbed. Piers would be constructed within coffer cells, which would be removed after construction. Under this alternative, construction access to the piers would be accomplished with work barges or mats. Specifically, barges would be used for constructing piers in deeper water, while mats would be laid on the river bottom so equipment could access those piers located in shallower water. Construction under Alternative B is estimated to take 8 to 12 months.

Alternative C - Issue Section 26a Approval for Construction of the Pedestrian Bridge Using Rock Pads. The bridge design and alignment under Alternative B and C are the same. However, under Alternative C, temporary rock causeways or pads would be used for

construction equipment access to the instream pier sites. These causeways would be approximately 10 feet wide at the top with a 2:1 side slope. They would be built using 1-foot to 2-foot rock at the base, with a layer of 2-inch gravel at the top. The top elevation would be approximately 4 feet above river elevation 848 feet. Under this alternative, one causeway would be built from one side of the river, those piers built, then it would be removed, and the other pad would be built from the opposite side. Using this approach, approximately half of the entire river channel would be restricted at one time during construction. The rock fill would be removed after construction. Construction under this alternative is expected to take about 12 months.

Alternative D - Issue Section 26a Approval for Construction of a Suspension Pedestrian Bridge. This alternative involves the construction of an approximately 1,127-foot long single- or two-span suspension bridge. Support tower abutments on each riverbank would be located above the 100-year floodplain elevation and would be approximately 17 feet wide and 50 feet long. This design may require a third support tower located on the extreme upstream tip of the island complex. If this tower were necessary, construction equipment would be barged to the island. Support towers would most likely be 80 to 100 feet tall, but would be no taller than 135 feet above the foundation. The two landward towers would be anchored with cables attached to anchors buried on each bank. Anchors would be 15 feet wide, 15 feet high, and 50 feet long and buried approximately 20 to 25 feet deep. The suspension bridge is advantageous in that it would not require the placement of piers in the river, thereby avoiding potential effects to aquatic life and stream flow patterns.

Other Alternatives Not Considered in Detail. Knox County considered another alternative, a ferry service, to provide pedestrian access to both sides of the river. This option was considered infeasible mainly due to safety concerns. In addition, the possibility of alternate bridge alignments upstream or downstream of the proposed location was considered. However, these alternate alignments were considered infeasible due to land ownership issues and the proximity of the project to the county boundary line.

Impacts Assessment

TVA determined that impacts to prime or unique farmland; groundwater; unique or important terrestrial habitats; parklands, state or national forests, trails, greenways, wilderness, scenic or other ecologically critical areas; and wetlands would be absent or minor. No production of hazardous wastes, wastes requiring special handling and disposal, or negative social or socioeconomic impacts are anticipated. The project is not in conflict with any plan, existing land use, or zoning regulation. No adverse effect on public facilities or services is expected.

With the proper implementation of appropriate construction Best Management Practices, as required by necessary permits, and because the bridge piers would be constructed within dewatered cofferdams, potential effects to surface water quality would be minor under Alternative B or C. Pier construction under Alternative B would cause a minor amount of fish habitat loss. Because fish are mobile, they can avoid areas of instream disturbance during construction and would likely return following project completion. Thus, potential effects to fish under Alternative B would be temporary and minor. Construction of the pedestrian bridge under Alternative B is not likely to adversely affect individuals or populations of the federally listed snail darter and would not have an adverse effect on the state-listed fish species present in the area.

Within two weeks prior to the start of construction in the river, all instream areas would be surveyed for mussels under Alternative B. Mussels that would be directly affected would be relocated at least 50 feet from the disturbance. If even one individual pink mucket mussel (a

federally listed as endangered species) is found, construction would cease, and formal consultation under Section 7 of the Endangered Species Act would be initiated. If no pink muckets are found, the proposed action is not likely to adversely affect individuals or populations of the pink mucket. Potential effects to common aquatic life under Alternative B would be temporary and minor.

Because construction under Alternative C involves the placement of a causeway across approximately half of the river channel, it poses a higher risk of potential effects to water quality and aquatic life than Alternative B because of the increased potential for bank erosion, turbidity, and bottom scour. Similarly, this extensive bottom disturbance would subject the federally listed snail darter to unavoidable impacts due to loss of habitat. Thus, construction of the proposed bridge under Alternative C is likely to adversely affect the population of snail darters and pink muckets in the Seven Islands area of the French Broad River.

Implementation of Alternative D (the suspension bridge option) would not involve construction in the river, and Best Management Practices would be used to prevent the introduction of soil or other materials into surface waters. Thus, adoption of this alternative would have essentially no potential adverse effects to water quality, stream flow, or aquatic life, including the pink mucket mussel and the snail darter or their habitats in this segment of the French Broad River. The U.S. Fish and Wildlife Service (USFWS) concurred with TVA's determination that adoption of Alternative D would not affect any listed aquatic species or their habitats.

Because of the limited amount of landward disturbance during construction, potential effects to terrestrial life, including plants and animals, would be temporary and minor. No effects to listed terrestrial species are anticipated under any of the action alternatives.

A Memorandum of Agreement (MOA) was established between TVA, the Tennessee State Historic Preservation Officer (SHPO), the U.S. Army Corps of Engineers, Knox County, and the United Keetoowah Band of Cherokee Indians of Oklahoma to stipulate measures to be taken to ensure protection of historic resources in compliance with Section 106 of the National Historic Preservation Act regardless of the alternative selected.

Bridges are considered repetitive actions in the 100-year floodplain. Thus, Section 26a approval of the proposed pedestrian bridge would be consistent with Executive Order 11988, Floodplain Management.

Although the presence of pedestrian bridge under any of the action alternatives would cause a change in the local visual character, these visual impacts would be localized and would not lower the scenic class by more than two levels. Noise would be experienced in the immediate area of the proposed bridge during construction, but would be limited to the construction period. Thus, changes in the aesthetic character of the area under any of the action alternatives would be minor and insignificant.

River-related recreation, such as canoeing and kayaking, would be affected somewhat during construction of the proposed bridge under all the action alternatives. Because of the need to effectively close half of the river channel during construction under Alternative C, adoption of this alternative would present the greatest potential for affecting local river recreation. Conversely, adoption of Alternative D (the suspension bridge) would have virtually no effect on river-based recreation because bridge construction would not involve placement of piers or equipment in the river channel. Provision of a pedestrian bridge under any of the action alternatives would afford additional access to the Seven Islands Wildlife Refuge from the

western side of the river. Overall, potential effects to recreational facilities and opportunities would be insignificant.

The 32-mile reach of the French Broad River below Douglas Dam is listed on the Nationwide Rivers Inventory (NRI). The construction of the bridge would not affect the free-flowing nature of this river segment. The outstandingly remarkable values (ORVs) attributed to this segment of the French Broad River include scenery, recreation, geology, fish, wildlife, history, and cultural resources. Placement of a pedestrian bridge at river mile 15.6 under any of the action alternatives would potentially affect some of the ORVs. There would be minimal, if any, adverse effects to geology, fish, wildlife, and history. Cultural resources could be affected under any of the three action alternatives; however, any potential effects to archaeological resources would be satisfactorily mitigated under the stipulations of the MOA. Potential effects to the recreational ORV would be beneficial. Adoption of any of the action alternatives would result in minor, localized effects to the scenic ORV with respect to intensity and extent. Overall, the construction of the bridge at this location is not expected to affect this segment's eligibility to be included in the National Wild and Scenic Rivers System. In addition, the potential classification of this portion of the NRI segment is not likely to be affected by the proposed bridge construction because this portion is likely to be classified as recreational with or without the presence of the proposed bridge. Thus, potential effects to NRI values would be minor and insignificant.

Mitigation

In addition to the requirements of any necessary permits, the General and Standard Conditions contained in the TVA 26a approval, and avoidance of the known archaeological sites, the following mitigation measures would be required by TVA. These measures would be included as conditions of the Section 26a approval.

- Knox County would comply with the stipulations of the MOA pursuant to 36 Code of Federal Regulations Part 800 signed by Knox County on September 17, 2007.
- Knox County would conduct additional archaeological evaluation investigations if project plans are revised or if resources potentially eligible for listing on the NRHP are identified during the investigations of the access corridor or equipment staging area.
- To allow for certain construction activities within the boundary of Site 40KN262, special construction considerations may be agreed upon by TVA, the Tennessee SHPO, and Knox County. The use of matting at equipment staging areas shall be of a design that is acceptable to the MOA signatories. This matting would disperse the size, weight, and pressure of the equipment during use to minimize impacting the ground below. All equipment that used within the boundaries of Site 40KN262 shall be confined to the matting. Furthermore, construction activities shall be conducted only in dry weather conditions.
- Knox County would ensure that for the duration of construction, a temporary barrier or fence is installed adjacent to Site 40KN287 to prevent the entrance of any construction equipment within the boundary of the site.
- Knox County would place appropriate signs at the bridge, elsewhere in the refuge, and along the river to alert boaters and visitors to the hazards of high river elevations and currents.

- Knox County would ensure that appropriate best management practices are implemented during construction to avoid erosion and sedimentation or the entrance of sediment or other pollutants into surface water or groundwater.
- Any support structures shall not exceed 135 feet in height above ground level.
- All disturbed areas shall be revegetated with native or noninvasive plant species.
- Any rock used for bank stabilization shall be clean and free of weed seeds or parts.
- Areas where vegetation has been disturbed or removed shall be revegetated with native species characteristic of the project vicinity.
- With the exception of cables, exposed surfaces of the pedestrian bridge shall be either naturally rusting steel or painted a natural background color such as dark brown, gray or green.
- Upon completion of construction activities, Knox County will provide a written report to TVA verifying the completion of the above mitigation measures.

Public and Intergovernmental Review

Knox County placed a public notice in the local newspaper on March 21, 2006, and contacted the Federal Emergency Management Agency regarding potential changes to the floodway due to the proposed bridge. The county's comment period extended from March 21 through April 20, 2006.

On April 29, 2007, Knox County placed a notice of its intentions concerning the proposed bridge in the local newspaper. That notice also mentioned that TVA would prepare an EA and would accept scoping comments until May 29, 2007.

During the scoping process, TVA contacted USFWS, the Tennessee SHPO, the National Park Service (NPS), and affected Native American tribes concerning the proposed project.

TVA issued a draft environmental assessment for review and comment on October 4, 2007, and sent copies to those governmental agencies listed in Chapter 6 of the final EA. Responses to comments received on the draft EA during the 60-day comment period are provided in Appendix B of the final EA. The Public Building Authority of Knox County and the City of Knoxville (PBA), the County's project manager, hosted a public meeting on the proposed project on November 7, 2007.

TVA received new conceptual plans for a suspension bridge from PBA in May 2009. TVA subsequently consulted with NPS, USFWS, and the Tennessee SHPO regarding these revised plans. Because the suspension bridge design would not involve placing piers in the water or potential effects to water quality or stream flow, TVA determined that construction of the bridge using the revised plans (Alternative D) would not affect any listed species or their habitats. USFWS concurred with this determination.

Conclusion and Findings

Based on the findings in the EA and the implementation of the stated mitigation measures, TVA concludes that the Section 26a approval of a pedestrian bridge as proposed under Alternative D would not be a major federal action significantly affecting the environment. Accordingly, an environmental impact statement is not required.

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9/18/09
Date Signed