

REVISED FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY
CITY OF HUNTSVILLE, AERIAL SEWER LINE
LIMESTONE COUNTY, ALABAMA

Background

On April 20, 2012, TVA issued a finding of no significant impact (FONSI) for construction of an 86-foot-long sewer line to be built on piers across Limestone Creek, in Limestone County, Alabama (Attachment 1). This was in response to a January 27, 2011, request by the City of Huntsville for approval under Section 26a of the Tennessee Valley Authority (TVA) Act. TVA cooperated with the United States Army Corps of Engineers (USACE) in the development of an environmental assessment (EA) of the crossing. The EA, which was finalized on February 8, 2012, focused on potential impacts to water quality and two endangered snail species which occur in the stream. The Biological Opinion (BO) issued by the United States Fish and Wildlife Service (USFWS) concluded that the project was not likely to jeopardize the existence of the endangered snails, provided conservation measures and other conditions were implemented. TVA Section 26a approval required the City to implement construction best management practices (BMPs), comply with standard and general conditions of the Section 26a Permit, and adhere to special conditions and requirements specified in the December 8, 2011 BO issued by the USFWS.

The work consisted of a 12-inch diameter ductile iron pipe supported by three concrete piers. Two piers are in the normal flow of the creek and the third pier is located in the overbank area of the creek out of the creek bed. The pipe spanned Limestone Creek and is approximately 86 linear feet, supported by the piers, and spaced 46 feet on center. The bottom elevation of the proposed sewer line pipe is at elevation 630.80 feet mean sea level, which is 2.03 feet above ordinary high water. Sheet piling was used to construct cofferdams to provide dry work areas during construction of each pier. The total disturbed area of the streambed was approximately 680 square feet.

The construction of the sewer line and creek crossing was completed in 2012. However the project was improperly engineered and the instream piers were unable to withstand the lateral flow and force of Limestone Creek which has led to the structural failure of the instream piers. In September 2013, the City proposed to demolish the existing sewer line crossing and reconstruct it with stronger and more stable construction. Under the revised proposal (Attachment 2), the existing sewer line pipe will be sawn off on each side of the instream piers, the existing failed piers will be demolished, and the piers and sewer line reconstructed along the same line. Ten by ten feet cofferdams will be used instream for the removal and reconstruction of the piers. The new larger piers will be anchored into bedrock capable of resisting a pull force of up to 25,000 pounds. The sewer line will be reinstalled with the same specifications as the original line. The total disturbed area of the streambed will be approximately 392 square feet (sq. ft.).

On May 28, 2014, USACE issued a supplement (Attachment 3) to the original EA which incorporated the modified impacts resulting from the revised proposal and further consultation

with the USFWS. These documents are incorporated by reference, and TVA is issuing this revised FONSI.

Alternatives

Consistent with the National Environmental Policy Act, two alternatives were considered in the supplemental EA: the No Build (or No Action) Alternative and the Action Alternative, which considers the reconstruction of the aerial sewer line over Limestone Creek.

Adoption of the No Action Alternative would result in the denial or withdrawal of the applicant's request for a Section 26a approval for reconstruction of the aerial sewer line across Limestone Creek. Environmental impacts associated with the reconstruction and operation of the sewer line would not occur, and no additional impacts to those resources currently under jurisdiction of the state of Alabama, USACE, and TVA would occur. However, if the existing sewer line crossing is not repaired, it could eventually fail and sanitation sewer service capacities would not be expanded. The City would not be able to meet future customer demands for the property recently annexed into the City.

Under the Proposed Action Alternative, TVA would issue a Section 26a approval for an aerial sewer line crossing of Limestone Creek. As conditions of the Section 26a approval, the applicant would be required to implement measures to minimize or reduce the environmental effects of the proposed project to levels of insignificance. This option is TVA's Preferred Alternative.

Impacts Assessment

Based on the analyses in the supplement to the EA, TVA has concluded that implementation of the Action Alternative would continue to result in no impacts to terrestrial endangered species; wetlands; prime or unique farmland; groundwater; unique or important terrestrial plant and wildlife habitats; recreation; parks or natural areas; visual resources; environmental justice; air quality; noise; transportation; solid waste; Wild and Scenic Rivers; or cultural resources. The Action Alternative would not contribute to the spread of invasive species.

The reconstruction of the sanitary sewer line stream crossing would continue to result in beneficial effects to socioeconomics for the City. Effects to floodplain are anticipated to be insignificant, and the Action Alternative remains consistent with Executive Order 11988. Impacts to surface water would continue to be offset by use of native creek rocks and stones, instead of limestone riprap rock, around the concrete piers.

The instream piers would be replaced at the same location. The original proposal which resulted in an impact of approximately 680 sq. ft. of stream habitat will be reduced to approximately 392 sq. ft. of stream habitat. As a result, fewer long term impacts to stream habitat are expected.

During preparation of the 2012 EA, stream surveys determined that the federally listed endangered armored snail and slender campeloma snail occur within the project area. USACE initiated formal consultation with the USFWS which was concluded in December 2011 when USFWS issued a BO. The BO noted that the construction would result in take of the two endangered snail species; consequently, USFWS identified measures to minimize impacts and reduce this incidental take and terms and conditions for carrying out these measures. USFWS concluded that the project was not likely to jeopardize the existence of the endangered snails, provided conservation measures and other conditions were implemented. No critical habitat has been designated for the species; therefore, none will be affected.

In response to the City's April 2013 permit application and the modifications, USACE reinitiated consultation with USFWS in November 2013 (Attachments 4 and 5) and USFWS reissued a BO on March 31, 2014 to address the modifications (Attachment 6). The USFWS stated that the proposed demolition and reconstruction of the municipal sewer line crossing on piers are not likely to jeopardize the continued existence of the armored snail or the slender campeloma. The reasonable and prudent measures, terms, and conditions identified in the original BO still apply to the revised action. TVA was a cooperating agency in this formal consultation and is subject to the required terms and conditions. The "Terms and Conditions" of the BO will be incorporated into the USACE and TVA permit approvals.

Mitigation and Special Conditions of Approval

To address potential impacts to threatened and endangered species and water quality from the proposed project, USACE would impose general and special conditions in its permit, as described in the supplemental EA, including compliance with the requirements of the March 31, 2014, BO, which minimizes or reduces the adverse environmental effects. In the "Terms and Conditions" of the BO, the City is required to restrict the streambed impact to 392 sq. ft., implement Best Management Practices (BMPs) during construction, remove accumulated debris at least once a year, and provide an annual report through written and photo documentation of debris removal and any newly observed streambed scour or bank erosion in the vicinity of the piers. USACE will also require that the City use native creek rocks and stones removed from the impact area for stabilization around the piers and native vegetation for shoreline stabilization rather than quarry limestone riprap. Further, the City will prepare a spill response plan for this pipeline crossing in the event of a rupture and spillage of raw sewage in the creek, and install upstream warning signs for boaters.

TVA Section 26a approval will require the City to implement construction BMPs and to comply with standard and general conditions of the Section 26a Permit. Further, the TVA Section 26a Permit will be conditioned to require the City to adhere to the following special conditions and requirements:

To minimize the take of the armored snail and the slender campeloma, the City shall implement the Terms and Conditions, and other stipulations and requirements of the BO (see Appendix E of the Supplemental EA), issued by the USFWS on March 31, 2014.

1. Limit the dewatered and excavated instream area to the construction area encompassed by the cofferdam at the two instream pier construction locations. This area should not exceed 392 sq. ft. of stream bottom.
2. Clearing and snagging will be conducted at a regular interval (minimum annually) in order to minimize the chance of colonization on debris by listed snails (future take) and to prevent excessive debris jams which would threaten the structural integrity of the construction. If a debris jam is minor (less than 10 percent channel blockage), the debris can be dislodged into stream flow. Large debris jams should be removed from the stream channel.

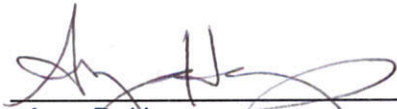
Conditions of Operation:

- A. Remove debris at least annually, but more frequently if needed.
- B. Methods to remove flow obstructions include sawing, cabling, winching, lifting, or dragging.
- C. No heavy equipment will be permitted within the stream.
- D. All heavy equipment will operate from beyond the top of stream banks.

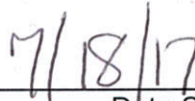
- E. Provide written and photo documentation of this action annually to the lead action agency (USACE), TVA and USFWS. Also, document any newly observed streambed scour or bank erosion in the vicinity of the piers within the annual report.
3. The City will make all records pertaining to the maintenance of the pipeline crossing available to TVA on request.

Conclusion and Findings

TVA has independently reviewed the supplement to the USACE EA and found it to be adequate and is therefore adopting it. Based upon the analyses documented in the Supplemental EA, TVA concludes that the reconstruction of the proposed aerial sewer line, as described under the Action Alternative, 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 related to federally threatened and endangered species and stream mitigation measures described above and in the EA.



Amy B. Henry,
Manager, NEPA Program and Valley Projects
Environmental Projects and Planning
Tennessee Valley Authority



Date Signed

Attachments

1. April 20, 2012 FONSI
2. Project Description
3. May 28, 2014 USACE Supplemental EA
4. November 14, 2013 USACE Letter to USFWS
5. December 9, 2013 Letter from USFWS
6. March 31, 2014 Biological Opinion