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FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY
LIMESTONE COUNTY WATER AND SEWER AUTHORITY EASEMENT

The Limestone County Water and Sewer Authority (LCWSA) proposes to install 14,700 feet of a 30-inch diameter municipal water transmission line which would cross the Tennessee River at Tennessee River Mile (TRM) 304.6 in Limestone County, Alabama. Of the 14,700 feet of pipeline, approximately 8,600 feet would occupy property held by the Tennessee Valley Authority (TVA). This action would require a 4-acre grant of easement from TVA over the relevant property. The LCWSA is also requesting a temporary construction license for a 30-foot-wide corridor to parallel the proposed pipeline for trench spoil holding, pipe lay down and equipment movement. The proposed action would allow LCWSA to purchase approximately 10 million gallons per day of potable water from Decatur Utilities, located in Morgan County, Alabama. Decatur Utilities has ample water supply capacity and would not need to increase their current approved water withdrawal of 68 million gallons per day from Wheeler Reservoir to supply water to LCWSA. LCWSA is proposing to install the new water pipeline to provide water service to portions of southeast Limestone County. The future water supply demands of Limestone County indicate that the existing 16-inch diameter water connection is inadequate and a 30-inch diameter water transmission line is needed.

The proposed action is the subject of an environmental assessment (EA) prepared by TVA. The EA is incorporated by reference. The U.S. Army Corps of Engineers (USACE) was a cooperating agency in the preparation of the EA. The EA addressed two alternatives. Under the No Action Alternative, LCWSA's request for a permanent easement over TVA land for the proposed installation of the pipeline would be denied or withdrawn. The consequences of this alternative would not meet the needs of the applicant of providing water service to southeast Limestone County. Under the Proposed Action Alternative, TVA would grant a permanent easement over approximately 4 acres of land on Wheeler Reservoir for the installation of the pipeline. TVA would also grant a temporary construction license over approximately 6 acres of TVA property parallel to the proposed pipeline route. The Proposed Action Alternative is TVA's preferred alternative.

The LCWSA considered other routes for the proposed pipeline. Available routes are limited due to the width of the Tennessee River in the area, various commercial and private land owners, and potential for adverse cultural and endangered species impacts at other potential crossing locations. The placement of the pipeline on the US-31 Bridge is not practicable because the bridge currently supports a waterline and a wastewater force main. The Alabama Department of Transportation would not allow additional attachments to the existing bridge. Another option of placing the pipeline on the CSX railroad bridge crossing was not received favorably by CSX.

Under the Proposed Action Alternative, two methods of pipeline installation would be required to construct the project. These are horizontal directional drilling (HDD) and traditional trenching and backfill. HDD would allow installation under the navigation channel while minimizing impacts to navigation. However, the total width of the river (approximately 7,500 feet) exceeds the capacity of HDD to install the pipeline in one piece, so trenching would also be required. Just after crossing onto TVA property on the north side of the navigation channel, the installation would transition to marine trenching operations that would use a shallow draft barge

to trench, assemble and lay approximately 5,700 feet of the pipe. HDD would then be used for approximately 1,800 feet across the navigation channel, while traditional trenching and backfill would be used for a 20-foot wide corridor across approximately 5,700 feet of river overbank east of the navigation channel. The trenched pipeline would be installed over a bed of crushed stone, then backfilled with a minimum 3-foot cover from original stockpiled soils to preconstruction grade. Floating turbidity barriers would be utilized to minimize siltation caused by construction activities.

Potential effects related to solid and hazardous waste, transportation, prime farmland, health and safety, geology, land use, air quality and global climate change were absent or minor. There would be temporary impacts to water quality, recreation, natural areas, terrestrial ecology and aquatic ecology during construction of the proposed pipeline. There would be a minor beneficial effect to community infrastructure because the pipeline would provide more reliable and adequate water supply. Effects to floodplain functions are anticipated to be insignificant, and the Proposed Action Alternative is consistent with Executive Order (EO) 11988. The proposed pipeline construction would temporarily impact 0.79 acre of wetlands. Direct impacts would be clearing of wetland vegetation for pipeline placement, excavation of wetland soils, and alteration of wetland hydrology. After construction the area would be allowed to revert to wetland habitat, but it would be maintained entirely in a scrub-shrub and emergent wetland to facilitate pipeline maintenance. There would be a minor loss of forested wetland function, but no permanent loss of wetland area. To mitigate for the conversion of 0.79 acre hardwood wetland to shrub-scrub wetland, LCWSA would within 1-year after construction of the water pipeline, plant wetland trees to replace those that were removed from the corridor at a 1:1 ratio.

In accordance with Section 106 of the NHPA pursuant to, TVA consulted with the Alabama State Historic Preservation Officer (SHPO) to assess the potential of the proposed actions to affect historic properties. A Phase I survey was conducted and no eligible historic properties were identified. The Alabama SHPO concurred with TVA's determination that the proposed undertaking would not affect any historic properties that are potentially eligible or currently listed in the National Register of Historic Places.

Pursuant to Section 7 of the Endangered Species Act, TVA and the USACE consulted with the U.S. Fish and Wildlife Service (USFWS) in 2007 and again in 2012 about the potential for the project to affect federally listed species. Four federally endangered mussel species (pink mucket, rough pigtoe, spectaclecase and sheepsnose) may occur in the project area. Mussel habitat surveys were conducted in 2007 and 2012 and determined that the project site was generally unsuitable for the listed mussel species. Considering the habitat, survey results, species' ecology, and time since last collection of the four federally endangered mussels, the TVA and USACE determined that the project would not affect the sheepsnose or spectaclecase, and was not likely to adversely affect the pink mucket and rough pigtoe mussels, which could occur in very low numbers in the project area. The USFWS concurred with the above determinations.

The USACE and the State of Alabama issued a Joint Public Notice 12-05 on April 9, 2012, and TVA released its public notice of the proposed action on April 23, 2012. The USACE received comment letters from the USFWS and Alabama Historical Commission. TVA did not receive any comments on its public notice. The route of the proposed water pipeline would cross the TVA Decatur-General Motors 161-kilovolt transmission line. TVA has no objection to the proposal provided due caution is used and that the water line and its associated valves are buried such that the line would not be damaged by heavy equipment used by TVA for right-of-way maintenance.

Mitigation

LCWSA would adhere to the following routine measures during site preparation, installation and operation of the proposed waterline:

- To minimize the spread of invasive terrestrial plant species, as directed by EO 13112, LCWSA will use clean rock for road building, will not remove vegetation from the site (burn in place), will clean all equipment before leaving the action areas, and will revegetate disturbed areas with native or non-native, non-invasive species.
- Use of floating turbidity barriers around all dredge activities and silt fences around all stockpiled dredge materials to reduce potential impacts to water quality in the vicinity of the proposed work.
- To minimize impacts to the floodplain, the following measures would be included as conditions of the easement agreement:
 - Any future facilities or equipment subject to flood damage would be located above or floodproofed to elevation 562.0.
 - Any future development proposed within the limits of the 100-year floodplain, elevation 559.1 would be consistent with the requirements of EO 11988.
 - All future development would be consistent with the requirements of the TVA Flood Control Storage Loss Guideline.

LCWSA would adhere to the following non-routine conditions during site preparation, installation and operation of the proposed waterline:

- To mitigate for the conversion of 0.79 acre hardwood wetland to shrub-scrub wetland, LCWSA would within 1-year after construction of the water pipeline, plant wetland trees to replace those that were removed from the corridor at a 1:1 ratio. For every wetland tree greater than or equal to 3-inch diameter at breast height that is removed; a 1-inch caliper sapling will be planted for every 1-inch of tree removed. For example, if a 20-inch caliper tree is removed, 20 1-inch caliper saplings will be planted. The tree planting would occur in the temporary construction area immediately adjacent to the impacted wetland areas in the proposed easement. The tree species planted will be a minimum of 1-inch caliper saplings and a mix of these native tree varieties; *Quercus phellos*, *Betula nigra*, *Nyssa sylvatica*, and *Quercus nigra*. LCWSA will document the trees removed, trees replanted, and submit all in a post-construction report. Tree survival will be monitored by LCWSA for five years after planting. A plant survivability of greater than 50 percent must occur with monitoring reports submitted on a yearly basis to both TVA and USACE by LCWSA. If survivability is less than 50 percent, additional plantings will be conducted by LCWSA and monitored for an additional 3 years with monitoring reports submitted on a yearly basis to both TVA and USACE by LCWSA.

Conclusion and Findings

Based on the findings listed above and the analyses in the EA, we conclude that the proposed action of TVA granting a permanent easement over approximately 4 acres of TVA property and granting a temporary construction license over approximately 6 acres of TVA property for the installation of water main pipeline 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