

FINDING OF NO SIGNIFICANT IMPACT
TENNESSEE VALLEY AUTHORITY
LINCOLN COUNTY RAW WATER INTAKE ENVIRONMENTAL ASSESSMENT

The Lincoln County Board of Public Utilities in Lincoln County, Tennessee (LCBPU) proposes to construct and operate a raw water intake (RWI) at Elk River Mile 75.3, left bank, in Lincoln County, Tennessee. The proposed action would include construction of a surface water withdrawal facility comprised of a water intake, pump building and associated water treatment plant. The purpose of the proposed action is to supplement water supplies for unincorporated areas of Lincoln County, Tennessee. The proposed RWI improvements require approval by the Tennessee Valley Authority (TVA) under Section 26a of the TVA Act. Therefore, TVA proposes to issue approval under Section 26a of the TVA Act for the installation of the RWI and associated structures on the Elk River.

The proposed action is the subject of an environmental assessment (EA) prepared by TVA. The EA is incorporated by reference. The EA addressed two alternatives. The No Action Alternative would result in denial or withdrawal of the applicant's request for a Section 26a approval for construction of the RWI on the Elk River. LCBPU would continue to extract its water supply from wells in nearby communities. Relying on groundwater, which is highly limited and difficult to monitor available supply, is more expensive and increases potential exposure to contaminated groundwater. Groundwater treatment facilities are not as equipped to remove contaminants as surface water treatment systems. Under this Alternative, there would be no construction of the raw water intake and associated structures and the needs of the applicant would not be met. Under the Action Alternative, TVA would issue Section 26a approval for the construction of the RWI on the Elk River. The proposed actions include construction of a surface water withdrawal facility comprised of a water intake, pump building and associated water treatment plant. The Action Alternative is TVA's preferred alternative.

The LCBPU considered four other alternatives to provide reliable water supply, including purchasing water from Fayetteville or another watershed in Alabama, building a reservoir, and developing additional wells. Each was deemed unfeasible due to cost, water quality and lack of sustainable water resources. The cities of Fayetteville and Lewisburg, Tennessee, have denied LCBPU requests for additional water supply. TVA reviewed the alternatives analysis during the application process and concurred with the analysis. The other alternatives were dismissed from further review.

The proposed action would occur within the mainstem Elk River, on the left descending riverbank and in adjacent floodplain areas, south of the river, in west-central Lincoln County, Tennessee. The action area would include a total of approximately 17.7 ac of aquatic and terrestrial areas, which would consist of the project footprint, land owned by Lincoln County surrounding the proposed water treatment plant and areas of the Elk River channel outside of the project footprint. The action area is in a rural setting, comprised of the river channel, riparian corridor, small woodlots, agricultural lands (pasture and crop lands) and roads. The proposed water treatment plant would be located on approximately 3.5 acres of a 10-acre site owned by the applicant. The 3.5-acre site consists of agricultural fields (uncut hay) and the only woody vegetation is located along the fencerows and in the middle of the property.

Potential effects related to cultural resources or endangered, special status plant or wildlife species, wetlands, navigation, or water quality were absent or minor. There would be minor or short-term impacts to aquatic ecology during the construction of the proposed RWI. Effects to floodplain function are insignificant and the Action Alternative is consistent with Executive Order 11988. The habitat at and adjacent to the project site is not suitable for the state-listed American ginseng and water stitchwort, therefore those plant species will not be impacted by the project.

In accordance with Section 106 of the National Historic Preservation Act, the Tennessee State Historic Preservation Officer (SHPO) was consulted to assess the potential of the proposed actions to affect historic properties. A Phase I survey was conducted and concluded that no cultural resources were identified in the project area. The Tennessee SHPO concurred with TVA's determination that the proposed action would not affect any historic properties.

Pursuant to Section 7 of the Endangered Species Act, TVA consulted with the U.S. Fish and Wildlife Service (USFWS) about the potential for the project to affect federally listed species. The federally endangered boulder darter is the only aquatic species that could potentially occur within the project area. Additionally, the project area within the Elk River lies within designated critical habitat for the fluted kidneyshell and slabside pearl mussel. A mussel survey found no slabside pearl mussels within the action area and unfavorable habitat conditions in the immediate vicinity of the proposed project. Additionally, the designated critical habitat for the fluted kidneyshell in the Elk River is currently unoccupied by the species. Considering the habitat and species' ecology, TVA determined that the project would adversely affect boulder darters, but would not adversely affect the other federally listed species or adversely modify designated critical habitat for mussels. The USFWS concurred with this determination. With adherence to the terms and conditions in the USFWS Biological Opinion (BO), impacts to endangered species will be insignificant.

The federally endangered gray bat, endangered Indiana bat, and threatened northern long-eared bat are also known from or likely to occur within Lincoln County. Five potential habitat trees are present in the proposed construction area for the water intake structure. TVA will require LCBPU to remove trees in the project area between October 15 and March 31 in order to avoid direct impacts to threatened and endangered bat species potentially present in trees during the summer roosting season. With adherence to this condition, impacts to bat species will be insignificant.

Mitigation

To avoid impacts to endangered species, TVA, USACE and LCBPU must comply with the terms and conditions (T&Cs) outlined in the BO (Appendix B). While these T&Cs were specifically designed to address potential effects to the boulder darter, USFWS anticipate that implementation of these measures would also minimize potential for impacts to designated critical habitat for the fluted kidneyshell and slabside pearl mussel. TVA will include the below mitigation measures in the 26a permit to LCBPU to comply with the BO.

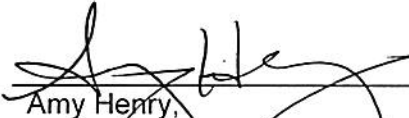
- LCBPU will implement the proposed action as described in the BA; the BA's supporting documentation, and the biological opinion.
- All rock materials transported to the work site will be durable and free of excessive fines.
- All fill materials, either excavated on-site or transported to the project site during project implementation, must be placed outside of the active flow channel at a minimum distance of the first terrace to minimize the potential for runoff from these materials into the Elk River; storage of fill materials on the project site will be temporary and cease upon completion of all construction.
- All heavy equipment and trucks will be cleaned, refueled and stored, when not in use, in a designated staging area, located a minimum of 300 ft from the ordinary high water mark of the Elk River.
- All heavy equipment will carry oil-absorbent booms at all times when operating; each piece of equipment shall carry a boom with no less than 15-gallon absorbency capacity.

- The project shall be completed expeditiously, and the river bottom, riverbank, riparian corridor and any areas disturbed with the floodplain (including the staging areas, where equipment storage, cleaning and fueling, and work/laydown would occur, and equipment access points) shall be restored as close to pre-implementation conditions as possible.
- Water pumped out of the area enclosed by the cofferdam shall be held in a constructed settling basin(s) or filtered to ensure it is clean prior to its discharge back into the Elk River.
- If concrete is poured in or near the river during project implementation, an aquatic biologist or hydrologist must be present to monitor pH levels in the Elk River. If spillage or leakage of concrete into the Elk River is observed, pouring will cease immediately and not resume until the source of the spill or leak is located, the USFWS is notified of the spill or leak, and corrective action is taken to prevent further spillage or leakage.
- Removal of riparian vegetation will be kept to a minimum. Following completion of construction activities, disturbed riverbank and floodplain areas will be immediately replanted with native tree and shrub species, and/or native or close equivalent grass species. All banks disturbed by project activities will be inspected, and replanted as needed, until vegetation is successfully reestablished. The USFWS's TFO in Cookeville, Tennessee (telephone: 931/528-6481), Lincoln County, Tennessee, Soil Conservation District (telephone: 931/438-2450, ext. 3), or University of Tennessee Extension Lincoln County (telephone: 931/433-1582) can be contacted for assistance in selecting the appropriate plant species and can provide information regarding planting methods.
- Use of bioengineering methods (soft, vegetative approaches) is preferred for long-term stabilization of riverbanks and is recommended over excessive use of hard structures (e.g., riprap) to minimize potential impacts to the boulder darter and other aquatic organisms, water quality, and riparian and instream habitats. Bioengineering techniques might include, but not be limited to, use of geotextile fabrics, layering with willow cuttings, construction of brush mattresses, fascines or vegetated geogrids, joint-planting willows into riprap, and use of a stinger to plant cuttings on upper riverbanks.
- Instream work is scheduled to occur in 2018 (Howard, personal communication, 2014c). The TVA and USACE will ensure pre-construction boulder darter monitoring is conducted annually over a minimum of three consecutive years and post-construction boulder darter monitoring is conducted annually over a minimum of five consecutive years. Monitoring should also address effectiveness of the intake structure/intake screen in preventing incidental take of boulder darters and document any observed take associated with the intake or potential post-project failures (riverbank sloughing, channel instability issues, etc.). The first year of post-project monitoring should occur and be documented relatively soon after completion of construction.
- Because project implementation will not be initiated until 2018, LCBPU will repeat the mussel survey that was conducted from ERM 75 to ERM 75.8 during July 2010 (Lewis Environmental Consulting, LLC 2010) to ensure that the status of federally listed freshwater mussel species has not changed within and in the near vicinity of the action area (i.e., listed mussels would be found inhabiting this reach of the Elk River). This survey would occur within the 12-month period prior to project implementation.

- LCBPU will revisit with the TVA and USACE within 3 to 6 months of project implementation to determine if any new species have been listed or critical habitat designated that may be affected by the action. If it is discovered that new species have been listed or critical habitat designated, re-initiation of formal consultation will be required.

Conclusion and Findings

Based on the findings listed above and the analyses in the EA, TVA concludes that the proposed action of TVA granting Section 26a approval for the construction of the raw water intake and associated structures 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