



STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
NASHVILLE, TENNESSEE 37243-0435

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Via Electronic Mail to mshigdon@tva.gov

Attn: Matthew Higdon, NEPA Compliance
Tennessee Valley Authority
400 West Summit Hill Drive, WT 11B
Knoxville, Tennessee 37902-1499

Dear Mr. Higdon:

The Tennessee Department of Environment and Conservation (TDEC) appreciates the opportunity to provide comments on the Tennessee Valley Authority (TVA) *Draft Supplemental Environmental Assessment* (SEA) which proposes design changes to the September 2016 Draft EA and Finding of No Significant Impact (FONSI) to document the potential effects of TVA's upgrades to the south embankment of Pickwick Landing Dam to improve performance of the dam during and following a large earthquake. The Pickwick Landing Dam is a multi-purpose concrete and earthen embankment dam located on the Tennessee River in Hardin County, Tennessee, near Tennessee's border with Mississippi and Alabama. The newly proposed actions include site access improvements; a new stormwater sediment basin; a new location for a staging area; a new option for use of barges and upstream staging/fleeting areas; and an increase in fill limits. The site access improvements involve the closure of North Carolina Landing Road to public traffic at the intersection with State Highway 128 until the project is complete.

Actions considered in detail within the Draft SEA include:

- **No Action Alternative.** Under the No Action Alternative, TVA would take no action to improve the condition of the embankment. TVA would continue to operate the dam and reservoir under normal operations. The risk of a dam breach and reservoir loss during or following a large seismic event would remain. This alternative is not considered reasonable because it does not address the risk to public health and safety or the region's economy. The No Action Alternative was detailed and analyzed in the 2016 EA.
- **Proposed Action Alternative.** Under the Proposed Action Alternative, TVA would proceed with the seismic upgrades to the dam as discussed in the 2016 EA with the proposed design changes outlined below. As proposed in the 2016 EA, TVA would construct berms along the toe of the upstream and downstream sides of the embankment to address potential shallow failures of the

embankment and place extended fill in select locations on each side of the embankment to address deeper failure modes. TVA also plans to utilize the 7.5 acre laydown area located on the west side of North Carolina Landing Road that will be used for parking, equipment and material storage and staging, placement of a temporary office trailer(s), and other project management activities detailed in the 2016 EA. The finally proposed design changes are considered in the Draft SEA:

1. **Downstream Site Access Improvements:** The 2016 EA work area did not include a construction access road to the downstream work area from North Carolina Landing Road. The original plan was to send construction traffic along an existing driveway to a maintenance building east of North Carolina Landing Road. This path included several sharp turns, which may be difficult for construction vehicles to negotiate. Therefore, TVA is now proposing to route construction vehicles to the work area via a newly constructed gravel access road that ties into North Carolina Landing Road at the driveway entrance. TVA is also proposing to close North Carolina Landing Road to public traffic at the intersection with State Highway 128.
2. **Additional Downstream Footprint near Station2 (Sta.) 40+00:** The large drainage area in the low-lying area downstream of the dam from about Sta. 40+00 to 48+00 requires the use of a stormwater sediment basin. The only feasible location for this stormwater sediment basin is in an area in the southwest corner of the low-lying area that is outside the 2016 EA Study Area. Therefore, TVA is proposing to utilize this additional 0.89-acre area for stormwater management.
3. **Downstream Staging Area:** At the time of the 2016 EA, the design included a limited staging area on the downstream side of the dam. TVA is now proposing to utilize a grassed, gently sloping embankment area north of the downstream fill area as a staging area for fill stockpiles, construction materials, and construction equipment. This area also includes the area under the State Highway 128 bridge, which would connect the upstream and downstream work areas, reducing the need to use local roads to transfer materials and equipment between the two work areas. Routing equipment through this area would result in a safer work environment for the Contractor and provide less disturbance to public traffic on State Highway 128.
4. **Barge Activities:** At the time of the 2016 EA, it was anticipated that all fill materials would be delivered to the site by truck on local roads. TVA is now proposing an option for the contractor to build a temporary barge unloading site at the north end of the upstream dam work area, where fill materials can be shipped to the site via barge, unloaded at the barge unloading site on the dam, and transported under the State Highway 128 bridge structure to the downstream work zone. The proposed unloading site is in an area where upstream fill was already planned to be placed. To support the use of the barge unloading site and the filling operation upstream of the dam, TVA is proposing to use two 35-acre upstream staging/fleeting areas (Exhibit 2 and Appendix A, Figure 2). The areas would be used to temporarily store 8 to 12 fully loaded barges until they are needed at the fill placement work zone. Tug boats would be utilized for short term durations (a work shift) and a spud barge or

temporary mooring would be utilized for longer term duration (several days). If requested, the Contractor could utilize the Hardin County Port Authority's facility about one mile upstream of the dam, on the south (left descending) bank, at the end of Hardin Dock Road, to support its barge use (Exhibit 2). The facility is leased to the Packaging Corporation of America (PCA). The facility includes a sheet pile bulkhead, a flat storage/operation area, and access to the end of Hardin Dock Road. The facility is currently being used by PCA and the facility would not require any upgrades.

5. Upstream Fill Area: After the 2016 EA, TVA performed additional bathymetric surveying and sediment thickness probing in the reservoir, which indicated that the riverbed was deeper than originally thought in some locations. Between Sta. 40+00 and 43+00, the deeper riverbed and thick sediment (14 feet thick) resulted in a wider footprint of extended fill, as the outer slope was continued outward to meet the deeper riverbed at the planned slope inclination, rather than steepening it to meet the 2016 EA Study Area footprint. Therefore, TVA is proposing to increase the limits of the upstream fill approximately 0.47 acres to provide a safe design of the Upstream Fill Area. TVA does not intend to require the contractor to re-grade the displaced sediment.
6. Upstream Site Access: Access to the upstream work area would require the use of the crest of the dam south of Sta. 13+00, where the State Highway 128 road embankment and the dam crest diverge. Construction vehicles would access the dam crest via the access road from State Park Road. TVA is proposing to close the access road to public traffic at the intersection with State Park Road. The dam crest would be fenced off and closed to the public during construction. The fencing would prevent access to this area of the dam, which is regularly used by the public for fishing.
7. Downstream Fill South of Station 15+00: The latest stability analyses indicate that fill would need to be placed to Sta. 12+00 and the downstream footprint would be slightly larger. Therefore, TVA is proposing to extend the downstream fill south of Sta. 15+00 to about Sta. 12+00 from 25.32 acres to approximately 28.06 acres to provide a safe design of the Downstream Fill South of Station 15+00.

TDEC has reviewed the Draft SEA and provides the following comments:

Cultural and Natural Resources

TDEC believes the Draft SEA adequately addresses potential impacts to cultural and natural resources within the proposed project area.¹

¹ This is a state-level review only and cannot be substituted for a federal agency Section 106 review/response. Additionally, a court order from Chancery Court must be obtained prior to the removal of any human graves. If human remains are encountered or accidentally uncovered by earthmoving activities, all activity within the immediate area must cease. The county coroner or medical examiner, a local law enforcement agency, and the state archaeologist's office should be notified at once (Tennessee Code Annotated 11-6-107d).

Air Resources

TDEC recommends that dust suppression methods be evaluated for portions of the project where earth movement or soil disturbances will likely occur, and that dust suppression be employed to mitigate any fugitive dust emissions likely to be generated. If open burning is being considered for disposal of tree or vegetative growth, TDEC recommends that other methods of disposal be investigated and that open burning only be employed if no other suitable disposal methods are available. When considering open burning, TDEC recommends avoiding burning on days with poor smoke dispersion, not burning on air quality alert days, use of good smoke management practices when planning the open burning and insuring coordination with local and state air pollution control agencies, forestry agencies and local fire agencies prior to conducting any planned burning. Finally, TDEC recommends implementing onsite vehicle emissions mitigation planning to insure that excessive vehicle idling is minimized. TDEC recommends the Final SEA reflect these recommendations.

Solid Waste

TDEC recommends that any wastes associated with the proposed action or its alternatives be managed in accordance with the Solid and Hazardous Waste Rules and Regulations of the State of Tennessee.² TDEC recommends that the Final SEA reference that any wastes that are generated during the construction process or uncovered during site preparation are subject to the Solid and Hazardous Waste Rules and Regulations of the State of Tennessee.

Water Resources

TDEC is concerned that the barge traffic and the creation of a barge offloading facility could impact the water supply intake for First Utility District of Hardin County. The intake is in very close proximity to the dam itself. There will be an increase in barge traffic, with the potential of barge accidents that could directly affect the intake, as well as the potential for spills from the barges or the barge facility. The location of First Utility District of Hardin County's intake is protected as critical infrastructure under Tennessee Code Annotated 10-7-504(a)(21)(A)(i) and Rule 0400-01-01-.01(5). TDEC encourages TVA to include these considerations in the Final SEA.

Proposed activities, including staging areas, the construction of a gravel road and a barge offloading facility, will disturb well more than one acre of land and will require a Stormwater Construction Permit (CGP) under the TDEC's National Pollution Discharge Elimination System Program (NPDES). The fill areas and barge offloading area and other activities described for the project will impact waters of the state and require an Aquatic Resource Alteration Permit (ARAP).³ TDEC encourages TVA to include these considerations in the Final SEA.

² Reference TDEC SWM Rule 0400 Chapter 11 for Solid Waste and Chapter 12 for Hazardous Waste <http://sos.tn.gov/effective-rules>.

³ If you have any questions about the NPDES or ARAP application process please contact, Thomas A. Moss, P.G., Environmental Review Coordinator – Compliance and Enforcement Unit at (615) 532-0170 or tom.moss@tn.gov.

TDEC appreciates the opportunity to comment on this Draft SEA. Please note that these comments are not indicative of approval or disapproval of the proposed action or its alternatives, nor should they be interpreted as an indication regarding future permitting decisions by TDEC. Please contact me should you have any questions regarding these comments.

Sincerely,



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