



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

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COMMISSIONER

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November 20, 2015

**Via First Class and Electronic Mail to [mshigdon@tva.gov](mailto:mshigdon@tva.gov)**

**Matthew Higdon**

NEPA Specialist- TVA Boone Dam  
Tennessee Valley Authority  
400 W. Summit Hill Drive, WT11D  
Knoxville, TN 37902

Dear Matthew Higdon:

The Tennessee Department of Environment and Conservation (TDEC) appreciates the opportunity to provide comments on the Tennessee Valley Authority (TVA) *Draft Environmental Assessment for the Boone Dam Seepage Remediation* (Draft EA). The applicant, TVA, proposes to remediate the seepage of water and sediment under Boone Dam, a multi-purpose dam on the South Fork Holston River, on the border between Sullivan and Washington Counties in Tennessee, by constructing a composite seepage barrier from the crest of the dam embankment downward into the foundation soils, weathered bedrock, and underlying bedrock beneath the dam. Construction of a composite seepage barrier would occur in stages, with the barrier consisting of an injected grout curtain and an excavated and filled concrete diaphragm wall. The composite seepage barrier would reduce movement of water through the dam's foundation and underlying bedrock, and would make the reoccurrence of seepage connection from the reservoir unlikely.

Actions considered in detail within the Draft EA include:

- No Action Alternative - TVA would take none of the proposed actions. No composite seepage barrier would be constructed to address seepage flow of water beneath the dam and erosion would continue. TVA would not implement additional risk reduction measures beyond those identified in Section 1.2. TVA would continue to operate the reservoir under Interim Operations under the No Action Alternative. Because of the continuing risk and potential impact to the public, this alternative is not considered reasonable.
- Action Alternative - TVA would construct a composite seepage barrier at Boone Dam over a period of 5 to 7 years, during which time Interim Reservoir Operations would continue. Construction of the seepage barrier, which would begin in 2016, would require numerous support activities on the dam reservation and at nearby Construction Support Areas. After construction is substantially completed, the reservoir would return to Normal Operations.

TDEC's **Division of Air Pollution Control (APC)** has reviewed the Draft EA and has no specific comments regarding the proposed action or its alternative.

TDEC'S **Division of Natural Areas (DNA)** has reviewed the Draft EA and comments that, provided that Best Management Practices are in place during the project, the proposed action is not expected to negatively affect federally or state-protected plants.<sup>1</sup> Based on information in the rare species database, DNA does not anticipate adverse impacts upon rare, threatened, and endangered plant species or critical habitat.

TDEC's **Tennessee Geological Survey (TGS)** has reviewed the Draft EA and has no specific comments regarding the proposed action or its alternative.

TDEC'S **Division of Water Resources (DWR)** has reviewed the Draft EA and has the following comments on the proposed actions:

- DWR supports the approach TVA is taking for the mitigation of the Boone Dam and notes that it is currently working with TVA on the mitigation project and will continue to do so.<sup>2</sup>
- Under section 2.2.2 "Construction Support, Construction Support Area 2," DWR recommends that TVA clarify whether or not the mentioned depressions are sinkholes and if there are other sinkholes in the area that will receive fill. If so, DWR recommends that TVA notify TDEC's Underground Injection Control (UIC) Program before filling operations commence.<sup>3</sup>
- DWR comments that the City of Bristol Bluff City withdraws water from this area and recommends that TVA be in contact with the city, if it has not done so already, regarding its proposed actions.

TDEC appreciates the opportunity to comment on the Draft EA. 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 of all necessary permits that may be required from TDEC should action be taken. Please contact me should you have any questions regarding these comments.

Sincerely,



Michelle Walker Owenby  
Assistant Commissioner of Policy and Planning  
Phone: (615) 532-9668

cc:

Lacey Hardin, TDEC, APC  
Stephanie A. Williams, TDEC, DNA

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<sup>1</sup> All known records of these species occur beyond the proposed construction areas.

<sup>2</sup> At this time, TVA has been issued a general stormwater construction permit, permit #TNR191461; an underground injection control (UIC), permit #0000113, for the grouting activities; and an aquatic resource alteration permit (ARAP), permit # NRS15.107, for the development of existing reservoir property south of Minga Road to provide public access to Boone Reservoir during the deep drawdown of Boone Reservoir and Boone Dam.

<sup>3</sup> TVA will also need to be in contact with the UIC Program on the grouting plan, mixtures, and locations and on the up and down stream monitoring during grouting operations.

Ron Zurawski, TDEC, TGS  
James Sutherland, TDEC, DWR