



*Commonwealth of Virginia*

*VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY*

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July 3, 2025

Charlie Hamilton  
Chair of the Water Quality Committee  
1855 Heron Point  
Gretna, VA, 22557

**SENT VIA E-MAIL:** cshamilton2@gmail.com

Re: Draft Virginia Water Permit (VWP) Individual Permit Number 24-1547  
Smith Mountain Hydroelectric Project, Bedford, Campbell, Franklin, Pittsylvania, and  
Roanoke Counties, Virginia  
Department Response to Comments

Dear Mr. Hamilton:

Thank you for your comments on the subject draft VWP permit. Please find below the Department responses to the comments dated March 26, 2025, on the draft VWP permit.

Leesville Lake Association Comment 1: VDEQ should incorporate a time phased requirement for the permittee to achieve year-round compliance of 4.0 mg/l instantaneous dissolved oxygen, and 5.0 mg/l daily average dissolved oxygen in order to meet Virginia state standards. VDEQ should describe penalties if those standards are violated.

Department Response to Comment 1: Special Condition D. 7. was added to the permit and states:

“Should the permittee plan to modify or replace turbine units 2 or 4 at the Smith Mountain Dam powerhouse during the permit term, the permittee shall install aerating turbine technology as feasible, or other technology that provides at least an equivalent level of introduction of dissolved oxygen, for the purposes of dissolved oxygen improvement in accordance with Part I. A. 3..”

Special Condition D. 7. was added to ensure should any modifications to turbines 2 or 4 happen over the permit term that the permittee would be required to install measures concurrently, with the goal to improve dissolved oxygen (DO) levels as a result of turbine operations.

The facility’s previous VWP Permit No. 08-0572, contained requirements to conduct a Feasibility Study to evaluate physical or mechanical alterations of water releases procedures to increase DO levels in releases from Smith Mountain Lake and eliminate exceedances of water quality standards for DO. The Feasibility Study was completed in 2021, with no measure

identified that could potentially improve the DO levels to meet water quality standards 100% of the time and that were cost effective for the permittee. A new Special Condition E. 2. was added, requiring the permittee to continue studying, monitoring, and identifying additional methods to improve DO levels below Smith Mountain Lake Dam. Special Condition E 2 states:

“Within 240 days of the issuance of this permit, the permittee shall develop and submit a Dissolved Oxygen (DO) Improvement Plan (Plan) to the Department for review and approval. The permittee shall develop a comprehensive Plan, designed in consultation with DEQ, the Department of Wildlife Resources (DWR), and other state or federal agencies as directed, to address depressed DO levels downstream from Smith Mountain Lake Dam. The Plan shall include, at a minimum, the following:

- a. A comprehensive report on the previously conducted Feasibility Study, completed in 2021, which evaluated physical and mechanical options for mitigating low DO water releases resulting from operation of the Smith Mountain Hydroelectric Project. The comprehensive report on the initial Feasibility Study shall include narrative and results related to DO downstream of Smith Mountain Lake Dam.
- b. A process for understanding, describing, and delineating the nature, extent and duration of impacts resulting from release of low DO-containing waters below the Smith Mountain Lake Dam. This shall include, but not be limited to:
  - i. The geographic extent of the data collection and the duration of the monitoring to support the evaluation of impacts to beneficial uses as a result of the low DO-containing releases the Smith Mountain Lake Dam;
  - ii. Methodology of monitoring proposed, to include types of physical, chemical and biological data to be collected; and
  - iii. Methodology for assessing and evaluating impacts to beneficial uses and predicting efficacy of control measures, both operational and technological, in mitigating low DO levels in waters released from the Smith Mountain Lake Dam.
- c. DO improvement methodologies and measures the permittee proposes to be assessed for implementation, including timelines associated for implementation.

Once approved, this Plan shall be implemented, and any subsequent Department approved revisions to the Plan will become an enforceable part of this permit. The results of the Plan, including the permittee’s final proposal of method(s) to improve the DO downstream of Smith Mountain Lake Dam and timelines for implementation shall be provided to the Department as soon as they are available but not later than July 1, 2030, for Department review and approval.”

Leesville Lake Association Comment 2: VDEQ should mandate aggressive debris removal, reporting, and expeditious fielding of the Debris and Collection device at the Pigg River/Leesville Lake confluence to in order to provide safe navigation of the lake.

Department Response to Comment 2: Debris Management is a requirement of the facility’s Federal Energy Regulatory Commission (FERC) license.

If you have any questions, please feel free to contact me at (804) 659-1727 or [kathryne.dobbie@deq.virginia.gov](mailto:kathryne.dobbie@deq.virginia.gov).

Respectfully,

*Kathy Dobbie*

**Kathy Dobbie**

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