

Peer Review Plan

Modeling Theoretical Measures to Improve Water Quality for Grand Coulee Dam Releases, 2011-2015

Date

September 4, 2025

Originating Office

Bureau of Reclamation, Columbia-Pacific Northwest Region, Regional Office, 1150 N. Curtis Road, Boise, ID 83706

Reclamation Roles

Director or delegated manager: Roland Springer, Acting Regional Director, Columbia-Pacific Northwest Region, Bureau of Reclamation

Peer Review Lead: Michael Poulos, Civil Engineer (Hydrologic), Columbia-Pacific Northwest Region, Bureau of Reclamation

Subject and Purpose

This peer review will focus on a technical memorandum titled “*Modeling Theoretical Measures to Improve Water Quality for Grand Coulee Dam Releases, 2011-2015*”. This technical memorandum has been prepared for the United States (U.S.) Bureau of Reclamation (Reclamation) to evaluate the potential effects of different theoretical measures (i.e. structural or operations changes) to improve the water quality of releases from Grand Coulee Dam, in Washington. The dam has been identified as discharging water that contributes to temperatures and total dissolved gas (TDG) concentrations exceeding standards established by the Washington Department of Ecology (Ecology) under the Clean Water Act. A National Pollution Discharge Elimination System (NPDES) permit issued by the Environmental Protection Agency (EPA) subsequently certified by Ecology and the Confederated Tribes of the Colville Reservation (CTCR) allows for these discharges under certain terms and conditions. Following guidance from Ecology, Reclamation is developing a 10-year compliance schedule. Phase 1 of the study is a 1-year effort to inform and plan the 10-year process for Phase 2, in part by exploring the potential for conceptual measures (e.g., structural changes) to improve water quality. During Phase 1 Reclamation developed separate water quality attainment plans (WQAPs) for potentially improving 1) river temperatures, and 2) river TDG concentrations below Grand Coulee Dam. This technical memorandum summarizes the analyses performed during the development of WQAPs (Phase 1) to estimate the potential effects of a subset of the measures, prioritized as described in the WQAPs, and evaluate their effectiveness for improving water quality.

Impact of Dissemination

The modeling output compares potential effects that structural changes to the dam, reservoir, or river downstream could have on water quality. This study is not currently being used in a decision-making process (i.e., none of the reservoir operations are being considered for implementation at

this time), but it is considered influential due to its importance to Reclamation's mission and stakeholders. Because of this, the modeling output is expected to meet the definition of influential scientific information requiring internal peer input, as defined by Office of Management and Budget Final Information Quality Bulletin for Peer Review (70 FR 2664-2677) and Bureau of Reclamation (Reclamation) Manual Peer Review of Scientific Information and Assessments Policy (CMP P14).

Peer Review Scope

The review will focus on the assumptions defining the different potential measures for improving water quality, how they were modeled, the modeling results, and the limitations and uncertainties. Peer reviewers will be asked to provide responses relative to the following questions:

1. Are the assumptions for the measures and analyses approaches clearly explained in the technical memorandum?
2. Do the results make sense and clearly show the effects of the assumptions for the measures on reservoir operations and water quality?
3. Does the document adequately characterize the limitations and uncertainty associated with the analysis?

Timing of Review

The review period is September 4 to September 10, 2025.

Methodology of Review

An independent reviewer will give feedback on the peer review questions and share any additional comments or concerns. Preliminary review has been provided by team members from the Water Management and Environmental Services groups within Reclamation's Columbia-Pacific Northwest Regional Office, and the Department of the Interior's Office of the Solicitor. There will be no public participation in the peer-review process, but the technical memorandum will be shared with a workgroup of external stakeholders prior to official review of the WQAPs and supporting material for approval by Washington Department of Ecology (Ecology) in December 2025. This technical memorandum will not be finalized until approved by Ecology.

Number of Peer Reviewers

The peer review will use an independent peer-reviewer of appropriate technical expertise.

Reviewer Selection Process

The peer reviewer will have education and professional experience in river-reservoir and water quality modeling. The peer reviewer will be selected from Reclamation staff from the Columbia-Pacific Northwest Region who have had no involvement in the study.

Delivery of Findings

The peer reviewers may provide feedback using comments and tracked changes within the report.

Response to Peer Review

Peer review comments will be reviewed and appropriate relevant changes will be considered. Responses to the specific peer review questions will be recorded within an Excel comment tracker.

Federal Register Notice

Federal Register notices will not be provided announcing the formation of a peer-review team and completion of the final report.

Applicability of the Federal Advisory Committee Act

This peer review is not subject to the Federal Advisory Committee Act because an individual is being asked to review the subject matter. Reclamation is not seeking consensus advice from reviewers as a group.

Agency Contact

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