

## **Peer Review Plan**

### **The Thermal Regime of the Columbia River at Lake Roosevelt**

Date: March 12, 2018

Originating office: Bureau of Reclamation, Pacific Northwest Region, Columbia-Snake Salmon Recovery Office, 1150 N. Curtis Rd, Ste. 100 Boise ID 83706-1234

Reclamation roles:

Director or delegated manager: Lorri Gray, Regional Director, Pacific Northwest Region, Bureau of Reclamation

Peer Review Lead: Eric Rothwell, Hydro-Coordinator, Pacific Northwest Region, Bureau of Reclamation

Subject and Purpose: The Pacific Northwest (PN) Region developed a white paper, *The Thermal Regime of the Columbia River at Grand Coulee Dam and Lake Roosevelt*, in response to regional requests to examine the potential for Grand Coulee to be operated to reduce downstream temperatures. These requests are based on a long standing hypothesis in the region (outside of Reclamation) that the impoundment behind Grand Coulee (Franklin D. Roosevelt Reservoir, commonly referred to as Lake Roosevelt) could be used to help cool downstream water temperatures to benefit Endangered Species Act (ESA) listed salmon in the Columbia River. Reclamation began collecting temperature data in the reservoir in 2000. This data will contribute to a better understanding of what role Grand Coulee Dam could potentially play in reducing water temperatures in the Columbia River. The purpose of this paper presented for peer review is to examine data collected in Lake Roosevelt, as well as upstream and downstream of Grand Coulee Dam in the lower Columbia River, to characterize the current thermal regime. This paper also examines Grand Coulee Dam operational purposes and constraints, to provide a context to the regional request to use Grand Coulee to help cool water temperatures in the lower Columbia River.

Impact of Dissemination: The white paper is considered influential scientific information as defined by Office of Management and Budget Final Information Quality Bulletin for Peer Review (70 FR 2664-2677) and the Reclamation Manual Policy CMP P14 Peer Review of Scientific Information and Assessments. The nexus of this determination is that this document may provide a clearer understanding of the Columbia River thermal regime, opportunities or constraints at Grand Coulee Dam. There is potential that this information could inform ongoing processes in the basin, including the comprehensive Environmental Impact Statement (EIS) effort on the Columbia River System Operations being conducted by the Bureau of Reclamation, Army Corps of Engineers, and Bonneville Power Administration. Additionally, the information portrayed in this white paper may be useful to Environmental Protection Agency (EPA) for an anticipated need for a temperature Total Maximum Daily Load (TMDL) process for the Columbia River. This peer review is considered required based upon Reclamation Manual Policy CMP P14.

Peer Review Scope: The subject of this review is to consider the known information about the

Columbia River at Grand Coulee Dam, including temperature data upstream, downstream and in the reservoir, to characterize the thermal regime of the Columbia River. This information combined with a discussion of project configurations and operations addresses questions concerning whether and to what extent operational changes of Grand Coulee could influence downstream water temperatures to benefit ESA listed salmon in the Columbia River.

Specific questions for peer review:

- Does the interpretation of thermal data and water retention time support the hypothesis that Grand Coulee Dam has weak stratification during the summer?
  
- Does the description of the thermal regime and operational constraints support the claim that Grand Coulee Dam has little operational flexibility to influence downstream water temperatures to benefit to ESA listed salmon in the Columbia River?

This peer review is not a request to assess potential structural changes at Grand Coulee Dam.

Timing of Review:

Internal Peer Input	November 7, 2017 – February 23, 2018
Peer Review Plan on USBR Peer Review public website	March 16, 2018
External Peer Review	March 19 – April 2, 2018
Peer Review Report on USBR Peer Review public website	April 15, 2018

Methodology of Review: Internal review will provide peer input, including technical review from water management and modeling experts. Following internal review this peer review process will be conducted by individuals. The identities of the reviewers will be disclosed in the final Peer Review Report. Review findings/comments will be attributed to the individual reviewer. The peer review process will not provide opportunities for public participation.

Number of Peer Reviewers: It is anticipated that 2-3 peer reviewers will be utilized.

Reviewer Selection Process: The peer reviewers will have at least 10 years’ experience with expertise in hydrology, water quality, and water management. They will be identified as technical experts that understand Columbia River water temperature and associated processes, and that understand reservoir/system operations. Peer reviewers will have education, professional experience, and peer recognition in their field, and will have contributed to their field. Peer reviewers will be external to Reclamation. The peer review lead will identify peer reviewers to meet the Peer Review Scope and required expertise identified above. The peer review lead will also assure that peer reviewers do not have a conflict of interest. The peer review lead will combine peer reviews, and coordinate and document resolution in the preparation of a single report of peer review comments. The public will not be asked to nominate reviewers.

Delivery of findings: The peer reviewers will each submit a report of their findings to the Peer Review Lead by the end of the review period. At a minimum, their report will include a brief description of their findings and recommendations in a comment matrix. The report will be

provided digitally to the Peer Review Lead.

Response to Peer Review:

At the conclusion of receiving peer review comments, the Peer Review Lead will submit a final Peer Review Report to Reclamation's peer review website (<http://www.usbr.gov/main/qoi/peeragenda.html>), which will summarize the findings of the peer review and list the comments provided by the reviewers, as well as Reclamation's response to the comments, actions the agency will undertake regarding the comments, and reasons the agency believes those actions will satisfy any key concerns or recommendations.

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 (FACA): This peer review is not subject to the Federal Advisory Committee Act (FACA) because reviewers are being asked to provide individual reviews on the subject matter. Reclamation is not seeking consensus advice from the reviewers as a group.

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