

Peer Review Plan – Influential Scientific Information – 2021 Update of the Dam Safety Public Protection Guidelines

Date:

March 31, 2021

Originating office:

Bureau of Reclamation, Dam Safety and Infrastructure, Dam Safety Office

Reclamation roles:

Director or delegated manager: Karen Knight, Director, Dam Safety and Infrastructure

Peer Review Lead: Bob Pike, Chief, Dam Safety Office

Subject and Purpose:

The Public Protection Guidelines (PPG) are a framework for the implementation and application of the risk informed dam safety decision making (RIDM) process at Reclamation. The focus of the PPG is on the risk assessment phase of the RIDM process, wherein the risk estimates generated in a dam safety risk analysis are interpreted with respect to the potential need for action to reduce or better understand the risks posed by a facility. The PPG are intended to provide risk assessment guidance to risk analysis participants and report authors (Reclamation staff as well as contractors), quality control guidance to peer reviewers and Dam Safety Advisory Team (DSAT) members, and methodology background to program managers and decision makers. The purpose of the 2021 PPG update is to document how the RIDM process has evolved in practice since the prior (2011) revision, as well as to address specific issues and concerns that have arisen over the past decade. Although the threshold risk indices for increasing justification for action are not being changed, the rationale for them is revisited, and a simplified risk portrayal chart is introduced.

Impact of Dissemination:

The risk analysis methodology used by Reclamation is built around fundamental probability theory concepts, and the risk assessment component of the RIDM process is grounded in decision science. As such, the 2021 PPG is considered to represent “scientific information”. Based on the definitions provided in the *OMB Bulletin*, the 2021 PPG may be designated as *Influential Scientific Information*. Some of the factors supporting this designation include:

- The risk assessment guidance in the 2021 PPG has a clear and substantial impact on public policy decisions related to the operation of Reclamation facilities.
- The application of the RIDM process can result in significant economic impacts (for example, reimbursable expenditures resulting from the modification of a facility).
- The Federal Government’s assessment of dam failure risk can directly influence the actions of state and local agencies (e.g., a decision to financially support the proposed third-party modification of a Reclamation dam).

While the Reclamation PPG are routinely referenced by other Federal agencies with dam safety oversight responsibility, as well as by private consultants working on behalf of such agencies, the 2021 PPG are not considered to represent a Highly Influential Scientific Assessment for the following reasons:

- Although the 2021 PPG introduce a methodology for the evaluation of dam safety incident risk, which could result in additional expenditure to reduce the risks of non-breach

incidents at Reclamation facilities, it is very unlikely that the annual cost impacts would ever exceed (or even approach) a value of \$500 million, which would be well in excess of the current typical annual Dam Safety budget allocation.

- Since the threshold risk index values described in the 2021 PPG (specifically, those associated with the potential for life loss as the result of a dam failure) are not being updated, the changes are unlikely to result in any significant public or political debate.
- The scientific information contained in the 2021 PPG is largely consistent with that of earlier version of the document, does not contradict the earlier information, and (with the exception of the incident risk component) is not considered to be novel or precedent setting.

Peer Review Scope:

In addition to any incidental comments made in the process of reviewing the document, peer reviewers will be asked to provide responses to the following questions:

1. Does the document represent a meaningful, substantive, and value-added update of the previous (2011) PPG revision?
2. Is the guidance provided by the document clear and likely to be helpful to Reclamation risk analysis teams, peer reviewers, and decision makers?
3. Is the updated rationale for the visual guidelines sound and generally consistent with Reclamation's public trust responsibility?
4. Is the proposed incident risk evaluation methodology consistent with the recommendations of the Oroville Dam spillway incident Independent Forensic Panel?
5. Are there additional background or reference documents that should be cited?
6. Are there any concerns about the scope or content of the draft document?

Timing of Review:

The review period is expected to be November 1-30, 2021. The final Peer Review Report is expected to be available on the U.S. Bureau of Reclamation Peer Review public website:

<http://www.usbr.gov/main/qoi/peeragenda.html>

on or around January 15, 2022.

Methodology of Review:

The formal peer review will be conducted by individuals. The identities of the reviewers will be disclosed in the final Peer Review Report, and review findings/comments attributed to individual reviewers. The formal peer review process will not provide opportunities for public participation. However, a public review period will follow the formal peer review, with notice of the opportunity for to review the document being provided on the Dam Safety Office internet site. The public review period is anticipated to run from January 15, 2022 through February 28, 2022. Notices will also be emailed to the United States Society on Dams, American Society of State Dam Safety Officials, and the International Committee on Large Dams.

Number of Peer Reviewers:

It is anticipated that 3-6 peer reviewers will be utilized.

Reviewer Selection Process:

The peer reviewers will be selected by Reclamation from the following categories of expertise:

- Former senior Reclamation staff with experience applying and developing previous versions of the PPG (1-2 reviewers).
- Consultants with extensive RIDM experience and practical knowledge of the requirements

- and responsibilities of Federal agencies with dam safety oversight roles (1-2 reviewers).
- Academics with extensive decision science background and a good understanding of the history and present disposition of the RIDM process (1-2 reviewers).

Delivery of findings:

Each peer reviewer will submit a digital copy of their report of findings to the Peer Review Lead by the end of the review period. The report of findings will address the six review questions outlined above and provide additional comments as needed. Any specific recommendations for changes to the draft document will be summarized in a separate section at the end of the report.

Response to Peer Review:

Six weeks after the last set of peer review comments has been received, 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>

This report will summarize the key findings and conclusions of the peer review, list any specific recommendations for changes to the draft document, provide Reclamation's response to each of the recommendations, and outline the actions (if any) that will be taken to address the peer review comments.

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 the reviewers will be procured through a contract.

Agency contact:

For more information, please contact:

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