United States Department of the Interior

BUREAU OF RECLAMATION
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MEMORANDUM

To: Research and Development (R&D) Personnel and R&D Program Participants

From: Dave A. Raff
Science Advisor

Subject: Research and Development Office Discretionary Peer Review Process

1. **Purpose:** This memorandum provides policy and guidance for Denver Office R&D employees and their Program Participants

2. **Authority:** IAW Reclamation Manual, Policy CMP P14

3. **Effective date:** This memorandum is effective on the date of issuance.

4. **Expiration date:** This memorandum shall remain in effect until otherwise superseded or otherwise cancelled.

5. Background: The R&D Office follows Reclamation's Peer Review Policy (Policy), which is based on the OMB Bulletin Final Information Quality Bulletin for Peer Review. The R&D Office funds projects in two different programs, the Science and Technology (S&T) Program and the Desalination and Water Purification Research Program (DWPR).

6. R&D Office Discretionary Peer Review – Overview: All scientific information disseminated by the R&D Office will undergo peer review in accordance with the following considerations:

- Step 1 - Determine if the Scientific Information to be disseminated meets the definitions for either Highly Influential Scientific Assessments (Policy section 3.C) or Influential Scientific Information (Policy section 3.E).
    - For guidance on how to judge the scientific information against these definitions, consider the factors listed in Policy section 6.
    - Typical projects funded through the competitive S&T and DWPR processes do not have known influence on decision-making processes at the time of dissemination and thus would not meet the standards of Influential Scientific

Information or Highly Influential Scientific Information. However, should there be a known connection this will be considered.
    - If one of these definitions are met, then follow the peer review process defined for these types of scientific information in Policy section 8. Otherwise proceed to Step 2.

- Step 2 - If Step 1 is not implemented, conduct Discretionary Peer Review (Policy section 7) which may be one of two paths as described in the following sections.

7. R&D Office Discretionary Peer Review - Minimum Requirements: Minimum requirements vary by R&D program as follows:

- DWPR Projects: All DWPR products are peer reviewed by the Grants Officer Technical Representative.
- S&T Program Projects:
    - All final reports are required to have one technical peer review from an individual not involved in developing the scientific information (i.e. independent review), documented with a signed verification form from the peer reviewer.
    - For Reclamation disseminated reports, a disclaimer is also required for final reports and other research products, this language can be found in the peer review policy:
        - *This document has been reviewed under the Research and Development Office Discretionary peer review process, consistent with Reclamation Policy CMP P14. It does not represent and should not be construed to represent Reclamation's determination, concurrence, or policy.*

8. R&D Office Discretionary Peer Review - Above Minimum Requirements, using Reclamation Peer Review Agenda Website

There may be circumstances when additional peer review is needed that goes above and beyond the minimum requirements for R&D Office Discretionary peer review. For example, some R&D scientific information products garner relatively more attention during development and it would seem to be beneficial to subject them to broader review, even though information products do not appear to directly meet the definition thresholds for Influential Scientific Information or Highly Influential Scientific Assessment.

To help identify these situations, the Policy section 7 indicates that a directorate may decide whether such review is, “cost effective, beneficial, or otherwise desirable.” To determine which R&D Office products should be subjected to additional peer review, the following criteria should be considered:

- Cost Effective
    - Would the peer review process be more effective than other types of technical review?
- Beneficial
    - Can the research benefit from additional review of project outcomes?
    - Would the research benefit from an independent critical technical review?
    - Does the peer review policy provide a process that would be beneficial to follow rather than creating an independent review process (research roadmaps)?
- Otherwise Desirable
    - Are there other reasons why peer review would be desirable?
    - Has the peer review been requested by an external entity?
    - Is there likely a decision process that will be informed by the information and additional peer review at this stage will be more efficient to Reclamation in the long run?

For identified situations, R&D Office will utilize the Peer Review Agenda Website to facilitate for the Discretionary Peer Review process. A Peer Review Plan will be posted, following Policy section 8.B for plan development but identifying the scientific information as not being Influential Scientific Information or Highly Influential Scientific Assessment. The Plan would likely call for inviting multiple independent reviews. Being a public website, these peer review situations would be publically visible.

9. R&D Office Examples of using Reclamation Peer Review Agenda Website

The R&D Office has projects which have undergone peer review using the Peer Review Agenda website, either with the scientific information being labeled Influential Scientific Information or as discretionary. Two examples for these respective situations are summarized below to help support the guidance above.

Literature Review and Scientific Synthesis on the Efficacy of Winter Orographic Cloud Seeding

The purpose of developing this science synthesis was to inform imminent policy discussions involving Reclamation Leadership. It was also expected that the findings of this science synthesis related to scientific efficacy of winter-time cloud seeding would be of interest to state and local entities who are currently investing in cloud seeding operations. Because of this imminent policy relevance and potential decision/investment relevance, this science synthesis was classified as influential scientific information. The peer review plan was developed to invite industry researchers and operators to review and comment on the synthesis.

Canals Roadmap - Discretionary Peer Review

Roadmapping plays an important role in identifying research and development needs and priorities. The canal roadmap was developed to specifically identify the research needs in relationship to Reclamation's canal infrastructure. Using Reclamation's peer review directive and standard, it was determined that this fell under a discretionary peer review. It was determined that, in general, roadmaps are not considered "influential" or "highly influential" scientific information because the roadmap itself will not have a substantial impact on important public policies or private sector decisions. Potentially, select specific research projects may fall under either of these definitions for scientific information and appropriate peer review will occur at that time.

Key websites for references:

- Reclamation's Peer Review Website - http://www.usbr.gov/main/qoi/peeragenda.html
- The Office of Management and Budget (OMB) directive, Final Information Quality Bulletin for Peer Review, dated December 16, 2004 (263 KB PDF)

Key contacts:

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