

# Reclamation Manual

## Directives and Standards

<b>Subject:</b>	Bureau of Reclamation Dam Safety Program
<b>Purpose:</b>	Describes Reclamation Dam Safety Program activities and the allocation of costs to Safety Evaluation of Existing Dams (SEED) and Safety of Dams (SOD) funding authorities for Reclamation Dam Safety activities. The benefit of this Directive and Standard (D&S) is to ensure consistent decision making actions for dam safety issues.
<b>Authority:</b>	Reclamation Project Act of 1902 and Supplementary Acts; Reclamation SOD Act of 1978, (Pub. L. 95-578; 92 Stat. 2471), as amended
<b>Approving Official:</b>	Director, Security, Safety, and Law Enforcement
<b>Contact:</b>	Dam Safety Office (84-44000); Asset Management Division (84-57000)

1. **Introduction.** The objective of the Reclamation Dam Safety Program is to ensure that Reclamation facilities do not present unreasonable risks to the public, public safety, property, and/or the environment. To achieve this objective, Reclamation monitors, examines, and evaluates the performance of dams in its inventory of facilities. Issues will be evaluated in terms of loading conditions, structural response, and the potential consequences of dam failure. Reasonable risk reduction actions will be implemented as Reclamation determines appropriate. In addition to SEED and SOD activities described herein, there are many activities funded from a variety of sources that help Reclamation achieve its Dam Safety Program objectives. Procedures for identifying, communicating, and documenting decisions are described in Reclamation Manual (RM), *Decisions Related to Dam Safety Issues* (FAC P02).
2. **Applicability.** This D&S applies to all Reclamation personnel and offices having jurisdiction and oversight for dam safety work associated with high or significant hazard potential dams that are either owned by Reclamation or are included as part of an authorized Reclamation project. This directive establishes the decision making requirements for determining activities to be performed within Reclamation's SEED and SOD portions of the Dam Safety Program. This directive also defines how project costs are determined and defines certain criteria for projects to be considered under the authority of the Reclamation SOD Act.
3. **Definitions.**
  - A. **Contractor.** Water and/or power user organization (a customer) that has an active repayment or water/power service contract with Reclamation, a Federal power marketing agency, or a non-Federal entity that pays or shares in the cost of the reimbursable portion of a proposed dam safety risk reduction action.

# Reclamation Manual

## Directives and Standards

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**B. Dam Safety Issue.** An issue that, if not resolved:

- (1) could lead to a failure or malfunction resulting in an uncontrolled release of stored water that would place the public and/or resources at risk, or
- (2) would compromise Reclamation's ability to detect developing adverse dam performance and prudently respond to that performance.

**C. Hazard Potential.**

- (1) **High Hazard Potential Dam.** A dam where failure or mis-operation will probably cause loss of human life.
- (2) **Significant Hazard Potential Dam.** A dam where failure or mis-operation results in no probable loss of human life but can cause economic loss, environmental damage, disruption of lifeline facilities, or can impact other concerns. Significant hazard potential classification dams are often located in predominantly rural or agricultural areas but could be located in areas with population and significant infrastructure.

**D. Risk.** A measure of the possibility of loss or injury; exposure to the chance of injury or loss.

**4. Responsibilities.**

**A. Commissioner.** Authority and responsibility for Reclamation dam safety is delegated from the Secretary of the Interior to the Commissioner of Reclamation in the Departmental Manual (DM), Parts 255 and 753.

**B. Regional Directors.** The regional director is responsible for:

- (1) All decisions related to issues at specific dams within their Region. All decisions will be made in collaboration with the Chief, Dam Safety Office and the responsible Area Manager for a specific dam. Authorizations of dam safety related structural modifications under the Reclamation Safety of Dam Act, as amended, are delegated in the DM, Part 255 and remain the responsibility of the Commissioner.
- (2) Keeping the Commissioner adequately informed of dam safety issues and decisions.
- (3) Assuring that decisions requiring risk reduction actions are communicated to the contractors and power marketing agencies, that a plan will be developed for periodic communication and reporting of project status to contractors during the period of the dam safety modification project, and contractors are provided an opportunity to participate in the development of the risk reduction alternatives.

# Reclamation Manual

## Directives and Standards

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- (4) Assuring all information protection requirements according to RM D&S, including *Identifying and Safeguarding for Official Use Only (FOUO) Information* (SLE 02-01), for contractors are communicated with contractors and are met.
- C. **Chief, Dam Safety Office.** The Chief, Dam Safety Office is responsible for:
- (1) collaborating with regional directors and area managers on all decisions to resolve dam safety issues; and
  - (2) keeping the Commissioner adequately informed of dam safety issues and decisions.
- D. **Area Manager.** The area manager is responsible for:
- (1) collaborating with regional directors and Chief, Dam Safety Office on all decisions to resolve dam safety issues; and
  - (2) assuring that all information protection requirements according to SLE 02-01 for contractors are communicated with contractors.
- E. **Reclamation Employees.** All Reclamation employees are responsible for communication of dam safety issues that have been identified or that have been called to their attention through the official channels of the employee's particular organization to the Chief, Dam Safety Office, the regional director, or the area manager for a specific dam. Employees may also communicate directly to the Chief, Dam Safety Office, the regional director, or the area manager.
- F. **Reclamation Contractors.** Reclamation contractors who have elected to participate in the process of determining a risk reduction action are responsible for meeting all the information protection requirements according to SLE 02-01.
5. **SEED Activities.**
- A. **SEED Activities and Non-Reimbursable Costs.** SEED activities provide assurance that Reclamation dams perform in a manner to achieve Reclamation's Dam Safety Program objective. The SEED portion of the Dam Safety Program provides for data collection, performance monitoring, periodic examinations, technical studies, and analyses to identify and evaluate potential dam safety issues. SEED activities are performed at Reclamation's high and significant hazard dams that pose a risk to the public. Costs associated with activities performed in the SEED program will be nonreimbursable. SEED activities benefit the public by ensuring that prudent and reasonable practices are used to manage risks and identify dam safety issues that place people, property, or the environment at unreasonable levels of risk. The results of SEED activities allow Reclamation decision makers to identify and prioritize risk

# Reclamation Manual

## Directives and Standards

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reduction actions based on their relative effectiveness in reducing risk to the public across the inventory of high and significant hazard potential dams. SEED program activities comply with criteria established in RM D&S, *Reclamation-Wide Program Funding Criteria* (BGT 04-02), because the activities are designed to ensure that Reclamation facilities serve their intended purposes safely, productively, and economically.

- B. Decision Making.** Decisions are developed within the SEED program to determine whether a dam safety issue requires risk reduction. Studies, referred to as issue evaluations, to support this type of decision may include review of available data, collection of additional data, analyses of existing conditions, risk analysis of existing conditions, and other studies as determined to be necessary to adequately characterize the risk at a dam. If risk reduction is required to address public safety or to avoid significant property or environmental loss, a decision is required to determine a corrective action is justified. Decisions are developed for dam safety issues such as a change in hazard classification potential, facility title transfer, annual assessment reporting, etc. Decisions are also developed for any non-dam safety activities at the facility which could impact risk as discussed in Paragraph 7.F. Non-Dam Safety Activities.
- C. Communication of Decisions.** Decisions will be communicated to Reclamation contracting entities and they may participate in the decision making process to provide input to Reclamation's potential course of action. The authority to make public safety decisions remains with Reclamation. Procedures for identifying, communicating, making, and documenting decisions are set forth in FAC P02. When decisions are made to reduce risk, the risk reduction action will be documented consistent with the SOD Act, as amended.
- 6. SOD Program Activities.**
- A. Initiation of SOD Activities.** The SOD Act provides authority for Reclamation to modify structures or take non-structural actions to reduce risk. When the decision is made that a risk reduction action to address public safety and preserve all or a portion of project benefits is justified and the purpose and need requirements for funding through the SOD Act have been met, all subsequent activities will be performed under the authority of the SOD Act. Reclamation may use SOD Act authority when the purpose and need for risk reduction actions is the result of changes from new hydrologic or seismic data, or changes in the state-of-the-art.
- B. Involvement of Water and/or Power Contractors and Power Marketing Agencies.** While final risk reduction action decisions remain with the Commissioner of Reclamation, all contractors who share in the repayment responsibilities for the SOD modifications to a dam will be actively provided the opportunity to fully participate in the process leading to the determination and implementation of the appropriate risk reduction actions. Reclamation believes that efforts to reduce risk at Reclamation dams

# Reclamation Manual

## Directives and Standards

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are enhanced by working in partnership with our water and/or power contractors to develop, review, and implement the necessary actions to assure that Reclamation dams safely perform their intended functions. To encourage this partnership, Reclamation will:

- (1) Provide contractors with a written explanation of the need to reduce risk within 30 days of a decision that such action is required.
- (2) Provide contractors with an explanation of the process for identifying, seeking authorization for, and implementing an appropriate risk reduction alternative.
- (3) Work with contractors to develop a plan for periodic communication and reporting of project status during the period of the dam safety modification project. The plan will identify the areas of implementation in which the contractors wish to be involved (project management, cost tracking, engineering design and evaluation, National Environmental Policy Act compliance, etc.). This plan will be documented in writing and transmitted to contractors.
- (4) Invite the contractor(s) to participate on the Project Management Team which will manage the activities necessary to carry out the risk reduction process. Whether or not the contractors decide to participate as part of the Project Management Team, minutes of the Project Management Team meetings will be provided to the contractors.
- (5) Document decisions concerning evaluation of risk reduction alternatives and provide that documentation in writing to contractors within 30 days of a Reclamation decision.
- (6) Identify opportunities (where appropriate) for the contractors to enter into contracts with Reclamation to perform certain activities in accordance Federal Acquisition Regulations (FAR) and other appropriate legal and policy authorities and Paragraph 5.A.(2)(c) of RM D&S, *Safety of Dams Repairment* (PEC 05-05).
- (7) Document the participation of the contractors in the modification report. The modification report will also include any alternative risk reduction actions recommended in writing by the contractors.

C. **Risk Reduction Responsibilities.** Reclamation will retain the responsibility for ensuring the technical adequacy of the risk reduction actions. When developing risk reduction alternatives, consideration will be given only to alternatives that can reasonably be accomplished and which significantly reduce the risk to the public. The judgments associated with “reasonable” and “significant” will be made by Reclamation’s decision makers. Comparison of alternatives and selection of the preferred alternative will be in accordance with *Principles and Requirements for*

# Reclamation Manual

## Directives and Standards

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*Federal Investments in Water Resources (March 2013)* and the National Environmental Policy Act. The comparison of alternatives will also include an analysis of the estimate of risk reduction provided by each alternative.

- D. **Dam Modifications Authorized by the SOD Act.** For the purposes of determining if a risk reduction action is authorized by the SOD Act, Reclamation will consider a dam modification to be any alternative where any of the significant existing features of the dam, including the water barrier, foundation, abutments, spillways, outlets, or existing dam site will be used in the modified facility. Modifications authorized by the SOD Act for new hydrologic or seismic loadings, or changes in the state-of-the-art may require certain components of the dam to be removed or rebuilt as a cost-effective means to reduce the risk of dam failure and the resultant consequences. Execution of the SOD modification may also require new features to be constructed to cost effectively reduce the risk of dam failure and the resultant consequences. Examples may be the construction of an embankment, or the addition of a new spillway or dike through a saddle in the reservoir rim.
- E. **SOD Program Activities.** The SOD Program authority provides that funds may be appropriated for the purpose of collecting data and developing risk reduction alternatives, environmental studies and mitigation, economic studies, and other activities that are necessary to determine the extent of required modifications. The budget line items for SOD work will consist of the Initiate SOD Corrective Action (ISCA) budget line item and specific dam line items. Once a decision is made that a risk reduction action is required then all future costs will be to the ISCA line item and specific dam line items. These funds may also be used for formulating the proposed risk reduction alternatives; preparing the modification report; preparing repayment studies; executing repayment contracts; and final design, data collection, independent review, value engineering, preconstruction site work, construction contracts, security during construction, construction management, “as built” drawings, construction documentation, confirmation of risk reduction, permitting and environmental mitigation, and any other activities necessary to implement the risk reduction action.
- F. **Non-Dam Safety Activities.** When non-dam safety related construction activities involve work on a high or significant hazard potential dam, the Chief, Dam Safety Office shall ensure evaluations are performed and documented to address the impacts of the work performed on the potential failure modes of the dam. The evaluations will be funded by other than the Dam Safety Program and will consist of an analysis of the work performed to verify that there are no new potential failure modes to be addressed and no significant changes to risks associated with existing identified potential failure modes. (See RM D&S, *Construction Activities* (FAC 03-02).)
- G. **Initiation of Construction and Repayment.** Once a proposed risk reduction action has met the Congressional reporting requirement in accordance with the SOD Act (or has been approved by the Commissioner for actions with an estimated actual

# Reclamation Manual

## Directives and Standards

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construction cost of \$20,000,000 (October 1, 2015, price levels) or less), Reclamation has authority to obligate funds for construction. Repayment of the costs incurred in the modification of a structure will be performed in accordance with the requirements of PEC 05-05.

## RECLAMATION MANUAL TRANSMITTAL SHEET

Effective Date: \_\_\_\_\_

Release No. \_\_\_\_\_

Ensure all employees needing this information are provided a copy of this release.

### Reclamation Manual Release Number and Subject

### Summary of Changes

NOTE: This Reclamation Manual release applies to all Reclamation employees. When an exclusive bargaining unit exists, changes to this release may be subject to the provisions of collective bargaining agreements.

### Filing instructions

Remove Sheets

Insert Sheets

All Reclamation Manual releases are available at <http://www.usbr.gov/recman/>

Filed by: \_\_\_\_\_

Date: \_\_\_\_\_