

Reclamation Manual

Directives and Standards

Subject:	Floodplain Management
Purpose:	To (1) reduce the vulnerability of the nation to loss of life and property and the disruption of societal and economic pursuits caused by flooding or facility operations; and (2) sustain, restore, or enhance the natural resources, ecosystems, and other functions of the floodplain. The benefits of this Directive and Standard (D&S) are to ensure the Bureau of Reclamation's compliance with Federal laws, protect life, and preserve the functions of floodplains.
Authority:	Reclamation Project Act of 1902 (32 Stat. 388), as amended and supplemented; Reclamation Safety of Dams Act of 1978 (Pub. L. 95-578), as amended; National Environmental Policy Act of 1969 (Pub. L. 91-190; 83 Stat. 832), as amended; Executive Order 11988 Floodplain Management; Executive Order 11990 Protection of Wetlands; Energy Policy Act of 1992 (Pub. L. 102-486); Principles and Requirements for Federal Investments in Water Resources (Council on Environmental Quality, March 2013); Federal Water Project Recreation Act (Pub. L. 89-72; 79 Stat. 213), as amended; Migratory Bird Conservation Act (45 Stat. 1222), as amended; Watershed Protection and Flood Prevention Act (Pub. L. 83-566); Intermodal Surface Transportation Efficiency Act of 1991 (Pub. L. 102-240); Water Resources Development Act of 2007 (Pub. L. 110-114); and project-specific authorizations.
Approving Official:	Director, Policy and Administration
Contact:	Water and Environmental Resources Division (WERD) (84-55000)

1. **Introduction.** Reclamation will proactively seek and implement appropriate floodplain management activities to sustain, restore, or enhance the functions of the floodplain. Watershed and floodplain management issues will be approached on an integrated systems approach accounting for watershed hydrology, river hydraulics, land form and channel geomorphology, river mechanics and sedimentation, land use, water quality and quantity, ecosystems, and functions of the floodplain. This D&S will be implemented within existing funding and under existing authorities, which are described in more detail in the *Floodplain Management Guidelines for Implementing Executive Order 11988* (Federal Register, Volume 43, 6030).
2. **Applicability.** This D&S is applicable to all Reclamation activities in floodplains or affecting floodplain management.
3. **Definitions.** The definitions under Paragraph 3 of Reclamation Manual (RM) Policy, *Floodplain Management*, CMP P01 apply to this D&S.

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4. Responsibilities.

- A. **Commissioner.** The Commissioner is responsible for establishing policy regarding floodplain management.
- B. **Regional Directors and Director, Policy and Administration.** The regional directors and the Director, Policy and Administration, are responsible for ensuring compliance with policies regarding floodplain management.

5. Public Safety/Hazard Mitigation/Emergency Management and Preparedness.

- A. Reclamation will take reasonable and prudent actions to provide for the safety of the public and reduce risk of property damages and economic loss stemming from flood flows, operations, or failure of its dams, levees, canals, or other facilities.
- B. Procedures for hazard mitigation and emergency management and preparedness activities will be reviewed on a regular basis and revised to minimize potential threat to the safety of the public. RM Policy, *Emergency Management*, FAC P01 and D&S, *Emergency Management*, FAC 01-01 provide more specific requirements on emergency management-related issues.
- C. Reclamation will emphasize cost-effective nonstructural approaches to reduce potential flood damages, reduce threat to public safety from its dams or other facilities, and enhance functions of the floodplain.
- D. Reclamation will consider reasonable alternatives to development in the floodplain unless the action is unavoidable. If the only practical alternative involves development in the floodplain, Reclamation will (1) reduce, to the greatest extent practicable, the potential adverse impacts of the proposed action, (2) take steps to restore or preserve the functions of the floodplain, and (3) reduce the vulnerability of that development to repetitive flood damages.
- E. All resource management plans, reservoir operating procedures, and Emergency Action Plans will consider the health and safety of the public along with protection and enhancement of other functions of floodplains.

6. Channel Capacity Management/Encroachment.

- A. Reclamation will operate and maintain its facilities to sustain or improve channel and floodplain flow carrying capacities in an effort to minimize property damage when large releases are necessary. When appropriate, channel maintenance will be conducted to prevent river aggradation which adversely affects floodplain drainage and the ability to convey and deliver water and sediment through a river system. Reclamation will take advantage of opportunities to periodically provide controlled

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releases to enhance functions of the floodplain and to improve channel capacity. Channel maintenance work will be conducted to allow natural geomorphic processes to occur to the maximum practical extent while at the same time providing for prudent public safety.

- B. Reclamation will actively participate in or conduct public awareness activities to educate the public on the risks and problems related to development within floodplains. Encroachment into floodplains and floodways below and around Reclamation facilities will be addressed and actively discouraged. Reclamation will support the acquisition of additional flood easements, where appropriate, to accomplish the purposes of CMP P01.

7. **Environmental Preservation, Restoration, or Enhancement.**

- A. Reclamation will protect, restore, or enhance the natural resources and functions of the floodplain. To fulfill this responsibility, Reclamation will pursue opportunities to reanalyze and modify operations and maintenance of its facilities to benefit floodplain ecosystems and to sustain, restore, or enhance aquatic riparian and wetland habitats. Reclamation will seek to minimize disruptive effects of projects on naturally established floodplain and sediment transport processes, natural water filtering processes, ecosystems, natural habitat, special status species, recreation, and cultural and archeological sites.
- B. Reclamation will promote opportunities to create or enhance habitat by reconnecting rivers to their floodplains or enhance ecosystems by controlled flooding of riparian habitats.
- C. Protection and enhancement of floodplains includes activities in watersheds above Reclamation facilities. Reclamation will proactively pursue resolution of water quality and sediment problems such as toxic mine and industrial drainage, erosion, and thermal enhancement by watershed reforestation, revegetation, and channel shaping. This includes working towards effective land use planning with other Federal agencies such as the Bureau of Land Management, Natural Resource Conservation Service, Bureau of Indian Affairs, National Park Service, and the Forest Service, plus Tribal, State, and local agencies and non-governmental organizations.
- D. Reclamation will manage for biodiversity and ecosystems resource management under memorandums of agreement and Federal statutes.

8. **Floodplain Management Partnerships/Flood Recovery.**

- A. Reclamation, in partnership with traditional and new constituencies, will assist in developing community-based solutions to current and anticipated floodplain

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management goals that build local responsibility for sustainable floodplain management decisions consistent with Reclamation's goals and operational requirements.

- B. Reclamation will pursue opportunities to partner with local interests to enable them to manage for the 100-year event (or more severe flood event, as appropriate), to prevent unacceptable risks, and enhance or protect functions of the floodplain.
- C. Reclamation will strive to reduce potentially serious flood problems in a manner consistent with protecting and enhancing the functions of floodplains. This can be accomplished through close coordination with the public and private operating entities, Federal Emergency Management Agency (FEMA), the Corps of Engineers, Fish and Wildlife Service, and other Federal, State, Tribal, and local resource and emergency management agencies as appropriate, during Reclamation studies, operational plan reviews, and flood response and recovery activities.
- D. If deemed to be in the Federal interest, Reclamation will provide technical assistance to States, Tribes, local interests, and other Federal agencies to assist community-based floodplain management solutions. Technical assistance can include, but is not limited to, watershed modeling; design and installation of early warning systems; flood forecasting; emergency management related information such as inundation maps and emergency action and operations plans; and integrated floodplain planning, design, implementation, and operation. Such technical assistance will generally be provided on a fully reimbursable basis unless the floodplain in question is associated with or influenced by a Reclamation facility.
- E. Working in partnership with the State and local communities and jurisdictions, Reclamation will improve and clarify flood event disaster recovery plans and capabilities, identify Reclamation's and other stakeholder's roles, and acquire state-of-the-art flood event communication systems where appropriate.
- F. Reclamation will, if possible and appropriate, participate on FEMA's Hazard Mitigation Teams.

Reclamation Manual Transmittal Sheet

Effective Date: _____

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Reclamation Manual Release Number and Subject

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