

Rehabilitation of High Hazard Potential Dam Floodplain Management Plan Fact Sheet

The Rehabilitation of High Hazard Dams grant program requires the development of a floodplain management plan. This summarizes the Floodplain Management Plan (FPMP) job aid developed by the National Dam Safety Review Board to provide references, and to aid grant recipients in their plan development.

Background and Need for Job Aid

The [Rehabilitation of High Hazard Potential Dams \(HHPD\) grant program](#) authorizing language and the [Water Resources Act of 1996](#) requires the development of a floodplain management plan. Floodplain management plans are designed to identify and implement actions to reduce or eliminate the adverse impacts of future flood events in the project area by recognizing all flood risks and residual risks associated with the dam. This guidance defines for HHPD sub-recipients and dam owners the basic elements needed in every plan. It also provides an outline to assist HHPD grantees in further defining these plans for the circumstances of each dam.

REQUIREMENTS FOR HHPD-ELIGIBLE DAMS

To be considered for the HHPD grant, the dam, recipients, and activity must all be eligible.

- Dams: must be owned privately or by small jurisdictions or non-profits. Dams may be designed for flood risk reduction, be one of many dams in a watershed that control flooding in a community, or established for other purposes, such as to provide water to local communities.
- Recipients: non-federal governments, non-profits. They are not required to be located in the community (or downstream) where the dam is located.
- Activity: planning, design, and construction (repair, rehabilitation, or removal.)

The Rehabilitation of High Hazard Potential Dams [United States Code [33 Sections 467f-2 \(e\) \(e\)](#)] grant program authorizing language specifies that the plan contain:

- “Potential measures, practices, and policies to reduce loss of life, injuries, damage to property and facilities, public expenditures, and other adverse impacts of flooding in the area protected by the project.
- Plans for flood fighting and evacuation including public education and awareness of flood risks.”



FEMA

Floodplain Management Plan Job Aid Outline

Reminder - the plan will be unique, tailored to the circumstances of each dam

Dam Information

- | | |
|----------------------------|---|
| (A) Name | (E) Typical dam operation |
| (B) Location | (F) State identifier |
| (C) Description of the dam | (G) National Inventory of Dams identifier |
| (D) Purpose(s) | |

1. Owner information (A) Owner Name, and (B) Owner contact information.
2. Community outreach efforts – describe efforts to engage community officials and others in the area impacted by the dam
3. List of documents related to the dam, or the area impacted by the dam
4. Names and roles of plan participants
5. HHPD project information: Phase of the project - Planning, Design, Construction, Goals of project, and Project timeline.
6. Description of floodplain, both upstream and downstream of the dam including regulatory (1% annual chance floodplain) and the inundation area if the dam were to fail.
7. Flood hazard risk identification in the area impacted by the dam for a range of flood events up to the design capacity of the dam and including the 1% annual chance event.
8. Impact of project on flood risk - these are potential examples
 - Repaired dam – reduced risk of dam failure and/or modified dam may provide additional flood risk reduction benefits. These impacts can be demonstrated by comparing modeled dam failure peak discharge vs. 100-yr flood discharge or comparing the pre- and post-modification 100-year flood discharge.
 - Removal – threat of dam failure is gone; flooding impacts are no longer compounded by dam failure. Alternatively, any flood risk reduction benefits provided by the dam no longer exist and natural flood impacts to downstream areas may be more severe.
 - Impact of the project on a range of relevant flood events including the 1% base flood elevation identified in the community’s Flood Insurance Study (FIS). This is most likely to occur when the dam is upgraded to increase spillway capacity or for a dam removal project. If the project changes the base flood elevations in the FIS, a [Letters of Map Revision and Conditional Letters of Map Revision](#) or [Letter of Map Amendment & Letter of Map Revision-Based on Fill Process](#) from FEMA will be needed.
 - Change in impact on critical facilities or infrastructure.
9. Potential actions to reduce flood risk. *(These are some examples that may not apply for all dams. Some may be beyond the authority of the sub-recipient to implement without community participation.)*

- Emergency preparedness and response actions taken during a significant flood event or dam emergency to protect life and property and lessen the impact of the event [Dam Emergency Action Plan, Dam Operation and Maintenance Plan, Community's Emergency Response Plan]
- Increased flood risk reduction benefits resulting from the modified dam, including increased flood control storage or improved reservoir operations.
- Potential floodplain modifications to remove flow restrictions and improve carrying capacity of the downstream channel. [Community's Hazard Mitigation Plan]
- Removal or flood proofing of high-risk structures in the floodplain [Community's Hazard Mitigation Plan]
- Project changes the regulatory floodplain elevations. [Obtain a [Letters of Map Revision and Conditional Letters of Map Revision](#) from FEMA]
- Voluntary land use restrictions to prevent further development in high-risk areas [Community's land use plan or zoning regulation] Public education related to the dam and the flood risks in the area impacted by the dam [this could be included as an appendix in the Emergency Action plan for the dam and include an annual educational activity and should be considered a major focus of the plan]

10. Identification of roles for each entity responsible for implementing plan actions (suggest using a table of actions, responsible parties, target date to complete or for recurring activities and suggested frequency)

11. Detail of process for future review and update, if appropriate

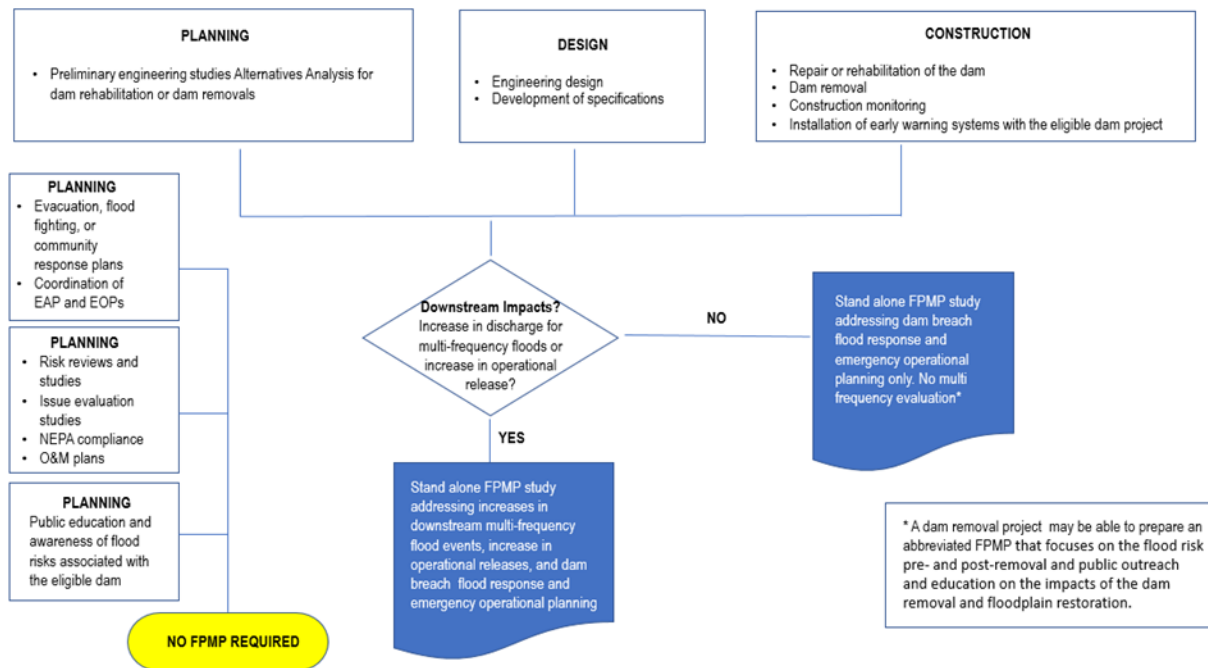


Figure 1. This table identifies when a Floodplain Management Plan is required and for which eligible grant activities.

FPMP references and resources for creating a plan for HHPD-eligible dams

- [Rehabilitation of high hazard potential dams](#) – 33 United States Code Section 467f–2
- [Water Resources Development Act of 1996](#) - 33 U.S. Code Section 701b-12
- Existing Emergency Action Plan, Operation and Maintenance Plan, or local Hazard Mitigation Plan and can be consolidated into the Floodplain Management Plan
- The U.S. Army Corps of Engineers resources:
 - [Guidance developed by United States Army Corps of Engineers](#) : Policy Guidance Letter (PGL) No. 52, Flood Plain Management Plans
 - U.S. Army Corps Planner’s Library: [Planning Community Toolbox](#)
- FEMA’s Community Rating System (CRS)- [Section 510 of the CRS Manual](#) provides guidance on plan development for communities participating in the National Flood Insurance Program.
- [FEMA’s Rehabilitation of High Hazard Potential Dam Grant Program Guidance](#), Section 5.6, lays out the objectives and potential components of a Floodplain Management Plan delves deeply into standard planning process and a range of issues that in many cases are beyond the authority and control of the subrecipient.