

# Reclamation Manual

## Directives and Standards

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### Emergency Action Plan Content Requirements

This appendix provides specific requirements for the content of Reclamation Emergency Action Plans (EAPs) to ensure a foundational level of uniformity across Reclamation.

1. **Essential Elements.** EAPs will include the following essential elements:
  - A. purpose and scope statement,
  - B. roles and responsibilities,
  - C. response process,
  - D. position/office-specific response checklists,
  - E. emergency level classification system,
  - F. notification chart(s) and protocol,
  - G. primary and backup communications systems information,
  - H. facility-specific conditions and potential failure modes,
  - I. preparedness and facility information, and
  - J. inundation maps (canal/dike/levee EAPs excepted). See Appendix C.
2. **Purpose and Scope.** EAPs will contain the mandatory purpose and scope statement, provided below, in the preface/introduction of the EAP. External agency versions of the EAP (where used) may modify or condense this statement.

**Purpose.** The primary purpose of this EAP is to provide effective and timely risk communication to the public safety agencies responsible for warning and evacuation of populations at risk (PAR) downstream of Reclamation water impoundment structures to reduce potential loss of life during situations of elevated flood risk.

Additionally, this EAP serves the purposes of providing, (1) response procedures for Reclamation and facility operations personnel, (2) an administrative record of programmatic intent, and (3) a reference for training and exercises.

**Scope.** The scope of this EAP includes:

- (1) **Flood Hazard Identification.** Identification of all unusual or hazardous conditions (e.g., potential failure modes, natural disasters, operational failure,

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security breach) provided as descriptive initiating conditions (i.e., triggers) that may lead to water releases from the structure that would threaten the PAR.

- (2) **Facility Owner/Operator Procedures.** Procedures and tools (e.g., checklists, emergency-level decision matrix, notification charts) intended for use by Reclamation (and partner operator, *if applicable*) personnel to provide a consistent detection, activation, classification, intervention, notification, re-evaluation, and termination process.
- (3) **Supporting Information.** Facility and other reference information (e.g., structural data, emergency classification definitions, warning time, inundation maps) to support flood response planning for public safety agencies responsible for warning and evacuation in the inundation zone.

This EAP does not include instructions for downstream/external public safety agencies and assumes that those agencies will use notifications and incident information following local flood response and evacuation plans (outside the jurisdiction of Reclamation). Furthermore, it is assumed that the public will receive and understand official information related to warning and evacuation and will act in its best interest to follow evacuation instructions when advised by local or state authorities.

3. **Roles and Responsibilities.** EAPs will include a roles and responsibility section that includes:
  - A. a general description of the EAP-related roles and responsibilities for each associated office, facility, and group/position,
  - B. a summary of the authority and responsibility for incident management and decision-making during dam safety/structural incidents and operational control of the facility during high water levels and high flow releases (e.g., Reclamation versus operating partner, and where applicable, the U.S. Army Corps of Engineers),
  - C. a general description of the roles of associated local, State, and Federal public safety agencies, and
  - D. identification of the positions within the area/field office (or operating partner where applicable) with authorization to formally activate the EAP on behalf of the responsible area/power office (e.g., area manager, facility manager, area office incident commander).

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4. **Response Process.** EAPs will include a standardized EAP process based on the concepts of, 1) detection, 2) activation, 3) classification, 4) notification, 5) intervention, 6) re-evaluation, and 7) termination.
5. **Response Checklists.** All detailed incident response instructions and specific tasks for Reclamation (and, where applicable, operating partner) personnel will be assigned and consolidated into role and/or office-specific checklists to provide an efficient and user-friendly response document.
6. **Emergency Level Classification System.** The emergency level system is the basis for classifying the EAP emergency and all Reclamation personnel will use it as the framework for response actions, situational awareness, and official EAP notifications. EAPs will incorporate and follow a standardized system of emergency level classification comprised of, (A) Emergency Levels and (B) initiating conditions, as defined below.
  - A. **Emergency Levels.** EAP incidents will be classified using Emergency Levels that are comprised of, 1) a numerical indicator of severity (i.e., “Level”) and 2) predefined category language, as defined below:
    - (1) Numerical levels of incident severity will range from 1 to 4, with 4 being the most severe situation. These levels are based on the potential threat of flooding to PAR (ranging from minor to catastrophic), and they provide an overall framework for understanding and communicating EAP-related emergencies. Each Level will be defined as shown below:
      - (a) Level 1—Threat corresponding to the need to notify affected public safety agencies to be on standby due to a potential structural/operational issue or high flow water releases (into the downstream river system).
      - (b) Level 2—Threat corresponding to the need to notify affected public safety agencies to consider public warning (and possibly evacuation of most vulnerable PAR) due to an escalating structural/operational threat or high flow releases impacting downstream infrastructure or low-lying infrastructure and/or public areas.
      - (c) Level 3—Threat corresponding to the need to notify affected public safety agencies to consider public evacuations due to a likely *impending* structural/operational failure or high flow releases with severe impacts to downstream infrastructure and PAR.
      - (d) Level 4—Threat corresponding to the need to notify affected public safety agencies that a catastrophic/sudden dam/canal/dike/levee failure has occurred and/or high flow releases with catastrophic impacts are threatening downstream infrastructure and PAR.

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- (2) Each Emergency Level will also be assigned a category and associated descriptive language based on the two hazard categories: 1) high flow and 2) structural, as further defined below:
- (a) The “high flow” category addresses hazard types (e.g., hydrologic where there is no apparent threat to the structure but where (design/operational) releases from the structure are (or will be) severe enough to impact communities downstream). This category is subdivided into four descriptive levels “minor,” “moderate,” “major,” and “catastrophic.”
    - (i) Initiating conditions will be determined by the responsible office commensurate with the threat to the PAR (according to the Level definitions above).
    - (ii) Level 1 high flows will correlate to the threshold where the safe channel capacity (if known) or other point of reference related to minor flooding is reached.
    - (iii) Level 3 high flow will correspond to the lowest level of downstream releases where evacuation of PAR should begin (to maximize warning time to PAR).
    - (iv) Level 4 high flows will correspond to the highest range of flooding from the structure where more severe consequences are expected, and additional evacuations or timeliness of evacuations is critical to saving lives.
  - (b) The “structural” category addresses all hazard types where the structure or its operation is threatened. This category is subdivided into four descriptive levels: “non-failure,” “potential failure,” “imminent failure,” or “catastrophic failure,” as defined below.
    - (i) Non-Failure—The condition of, or threat to, the structure is concerning (i.e., elevated risk) and may require intervention, where remediation is plausible.
    - (ii) Potential Failure—The condition of, or threat to, the structure is serious (i.e., high risk) and may require extraordinary intervention, where the likelihood of remediation is uncertain.
    - (iii) Imminent Failure—The condition of, or threat to, the structure is severe (i.e., very high risk), and where remediation is not likely.

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- (iv) Catastrophic Failure – The condition where the structure has catastrophically failed (e.g., immediately life-threatening situation to PAR and first responders) due to the catastrophic release of the reservoir into the downstream inundation area.
- (3) The final Emergency Level will combine the appropriate number (Level) and category language, as listed in the table below.

<i>Level</i>	<i>High Flow Category</i>	<i>Structural Category</i>
1	“Minor High Flow”	“Non-Failure”
2	“Moderate High Flow”	“Potential Failure”
3	“Major High Flow”	“Imminent Failure”
4	“Catastrophic High Flow”	“Catastrophic Failure”

- (4) EAPs will incorporate an internal alert protocol with established triggers and initial response actions for unusual situations (outside the scope of standing operating procedures) that occur beneath the threshold for an Emergency Level 1. These procedures will provide area/power/field, operators, and regional office staff situational awareness, an opportunity to investigate the unusual situation, confirm communications systems, and organize an incident response posture before escalating conditions and notifications to external agencies (at Level 1).
- (5) Application of the emergency level classification system for dike, levee, and canal structures will include the same severity numbering system and definitions (except the “high flow” category since it’s not applicable).
- (6) This Emergency Level System (as revised from the previous format) will be implemented on September 30, 2025 in all existing EAPs for Reclamation water impoundment structures.
- B. Initiating Conditions.** The classification of EAP-related incidents will incorporate descriptions of various hazard-based conditions/triggers that describe realistic situations that may occur at/on/to the structure to provide the basis for determination of Emergency Levels, according to the following:
- (1) **Hazard Types.** All applicable hazard types in which there is a risk of life-threatening flood waters occurring from the structure will be identified and used to organize the initiating condition descriptions and will include, at a minimum:

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- (a) hydrologic events (e.g., weather forecasts, high reservoir level/inflow/releases),
  - (b) structural threats (e.g., seepage, cracks, displacements),
  - (c) seismic events, and
  - (d) operational issues.
- (2) **Alignment.** The initiating conditions will be developed in accordance with the Emergency Level definitions for notifying affected public safety agencies. They will be refined in collaboration with those agencies to best support downstream risk communication. Where applicable, initiating conditions will be aligned (i.e., not conflict) with flood alert messaging provided by the National Weather Service.
- (3) **Potential Failure Modes.** For dam EAPs, potential failure modes (per the latest dam safety comprehensive review report) will be incorporated into the initiating conditions.
- (4) **Coordinated Development.** Initiating conditions will at a minimum be developed in coordination with engineering, operations, facility, and emergency management staff at the area/field/operations level, and where appropriate include regional and Denver engineering staff to ensure accuracy and effectiveness of initiating conditions for all EAPs.
7. **Notification Requirements.** EAPs will include (1) notification instructions and communications systems protocol, (2) notification charts, and (3) pre-scripted messages, to support accurate, consistent, and timely risk communication to affected public safety agencies, according to the requirements below:
- A. **Notification Instructions.** The EAP will include a narrative description of all information needed to support effective and timely internal and external notifications, and will, at a minimum, incorporate the below requirements.
- (1) Internal notifications:
    - (i) starting at an internal alert level and each Emergency Level declaration,
    - (ii) to necessary area/power/field office and dam operations personnel to ensure adequate situational awareness and coordination,
    - (iii) to the regional duty officer (per RM D&S *Serious Incident Reporting and Duty Officer Program* (EMG 03-01) and regional incident reporting protocol), and

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- (iv) to the regional security officer and the area office security coordinator.
- (2) External notifications:
  - (i) at each Emergency Level declaration (Level 1 and above),
  - (ii) when significant gate/release changes occur (not applicable to dike/levee/canal EAPs),
  - (iii) to all appropriate public safety agencies, as identified on the EAP notification chart(s), and
  - (iv) using Emergency Level numbers, except when doing so would conflict with state/county dam safety or emergency management numbering systems, or otherwise cause confusion.
- (3) Notification procedures will include protocol for using communications equipment and systems for all offices/locations (including backup systems and methods).
- (4) Notification procedures will identify a structured notification process, the primary office/group/position responsible for conducting EAP notifications, and a contingency communications protocol for on-site dam operation staff to report an imminent life-threatening condition to downstream public safety agencies (i.e., for Level 3 or 4 severity immediately calling 911 and/or local emergency management contacts).

**B. Notification Charts.** Notification charts will include, at a minimum:

- (1) the list of local/downstream public safety agencies that would be affected or are otherwise responsible for warning and evacuation of PAR associated with the structure(s) and/or affected inundation areas associated with the EAP,
- (2) the National Weather Service office(s) associated with the river system or affected inundation areas,
- (3) any (other) affected federal agencies or Department of the Interior bureaus or offices,
- (4) all affected American Indian tribes,
- (5) any dam owners with large/significant dams in the affected inundation areas,
- (6) any other impacted utilities or transportation organizations, stakeholders, or individual emergency response organizations in the affected inundation areas, and

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- (7) an order of contact priority, as applicable.
- C. **Pre-scripted Messages.** EAPs will include pre-scripted messages (aligned with identified emergency levels and categories) to support consistent and accurate notifications to external agencies.
8. **Primary and Backup Communications Systems Information.** EAPs will contain identification of and instructions for using primary (e.g., landline, cell phone) and secondary/backup (e.g., radios, satellite phone) means of communication at all facilities/locations necessary to ensure the sustainability of internal coordination and external notifications during emergencies. An appendix can include more detailed information, or if a separate document already provides this information (e.g., emergency communications plan), the EAP may summarize and refer to the external document.
9. **Facility-Specific Conditions and Potential Failure Modes.** EAPs will be tailored to and address conditions specific to the subject facility(ies), including hazard identification (detection and classification) and any procedures related to structural intervention. High and significant-hazard dam EAPs will consider, incorporate, and describe the appropriate potential failure modes from the most recent facility Comprehensive Review, and any pertinent facility-specific conditions, limitations, or issues.
10. **Preparedness and Facility Information.** EAPs will include a general description of the facility(ies) covered by the EAP and other useful information as appropriate (e.g., photos, maps, drawings, studies, reports, MOUs, emergency communication directory). Following FEMA 64, EAPs will include facility/office-specific information covering the following topics:
- training and exercising,
  - surveillance and monitoring,
  - evaluation of detection methods and limitations,
  - access to the site,
  - response during periods of darkness,
  - response during weekends and holidays,
  - response during periods of adverse weather,
  - alternative sources of power,
  - emergency supplies and information,
  - alternative systems of communication,
  - communication strategies to the public and media, and
  - facility shutdown procedures (for canal EAPs).



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11. **EAP Format and Content for Other Structures.** EAP format and content will be developed for dikes, levees, and canals based on the requirements of this D&S except where specified otherwise and according to the following requirements.
  - A. EAPs for urban canal reaches/systems will be identified and referred to as a “Canal Emergency Action Plan” (formerly “Emergency Management Plan”).
  - B. Canal EAP formats will follow the respective regional canal EAP guidelines/template.
  - C. Maps with information that supports evacuation planning and response will be included in canal EAPs, however inundation maps are not required.
  - D. EAP formats for dikes and levees will follow regional templates or guidance (if provided) or otherwise be integrated into existing EAPs for dams.
  - E. Initiating conditions will be developed to the greatest extent possible so that non-dam EAPs can classify incident severity using emergency levels.