

Emergency Action Plan Guidelines

OWRB FACT SHEET

Purpose and Description

An Emergency Action Plan (EAP) is a formal, signed document that identifies potential emergency scenarios and outlines preplanned actions to reduce the risk of loss of life and property damage in the event of a dam failure. It defines the dam owner's responsibilities, including identifying safety concerns, issuing timely public warnings, notifying emergency authorities, and providing breach inundation maps to support effective emergency response and safeguard public safety.

When people live in areas that could be flooded by a dam failure, an emergency potential is assumed to exist. A dam is classified as having "high hazard potential" if its failure could result in the loss of life. To help protect communities, all high hazard potential dams are required to have an Emergency Action Plan.

Six Elements of an Emergency Action Plan

An effective EAP should be tailored to the specific conditions of the area downstream of the dam. A complete EAP consists of six key elements:

- Notification Flowcharts
- Emergency Detection, Evaluation, and Classification
- Responsibilities
- Preparedness
- Inundation Maps
- Appendices

Emergency Action Plans are typically developed by the dam owner or engineer, in coordination with designated emergency response officials. For the EAP to be valid, it must be signed by all responsible authorities. These signatures indicate their understanding of an agreement to their roles during an emergency. Each party should retain a copy for use during emergency events.

Review and Updates

In accordance with Oklahoma Administrative Code (OAC) 785:25-7-7, an EAP must be reviewed annually



Figure 1. Breach inundation map

and updated to reflect changes in personnel or contact information. A comprehensive review, signed by all emergency contacts, must be completed at least once every five years. This review should include an assessment of changes in downstream development, dam modifications, or changes in the flood inundation area.

Notification Flowchart

Notification flowcharts outline communication procedures for each emergency level. Notifications may involve local and county emergency management agencies, law enforcement, dam engineers, the Oklahoma Water Resources Board (OWRB) Dam Safety staff, the National Weather Service (NWS), and residents living within the downstream flood inundation area. Including agencies like the NWS helps ensure access to broader public alert systems, such as the Emergency Alert System (EAS).

Emergency Action Plan Response Process

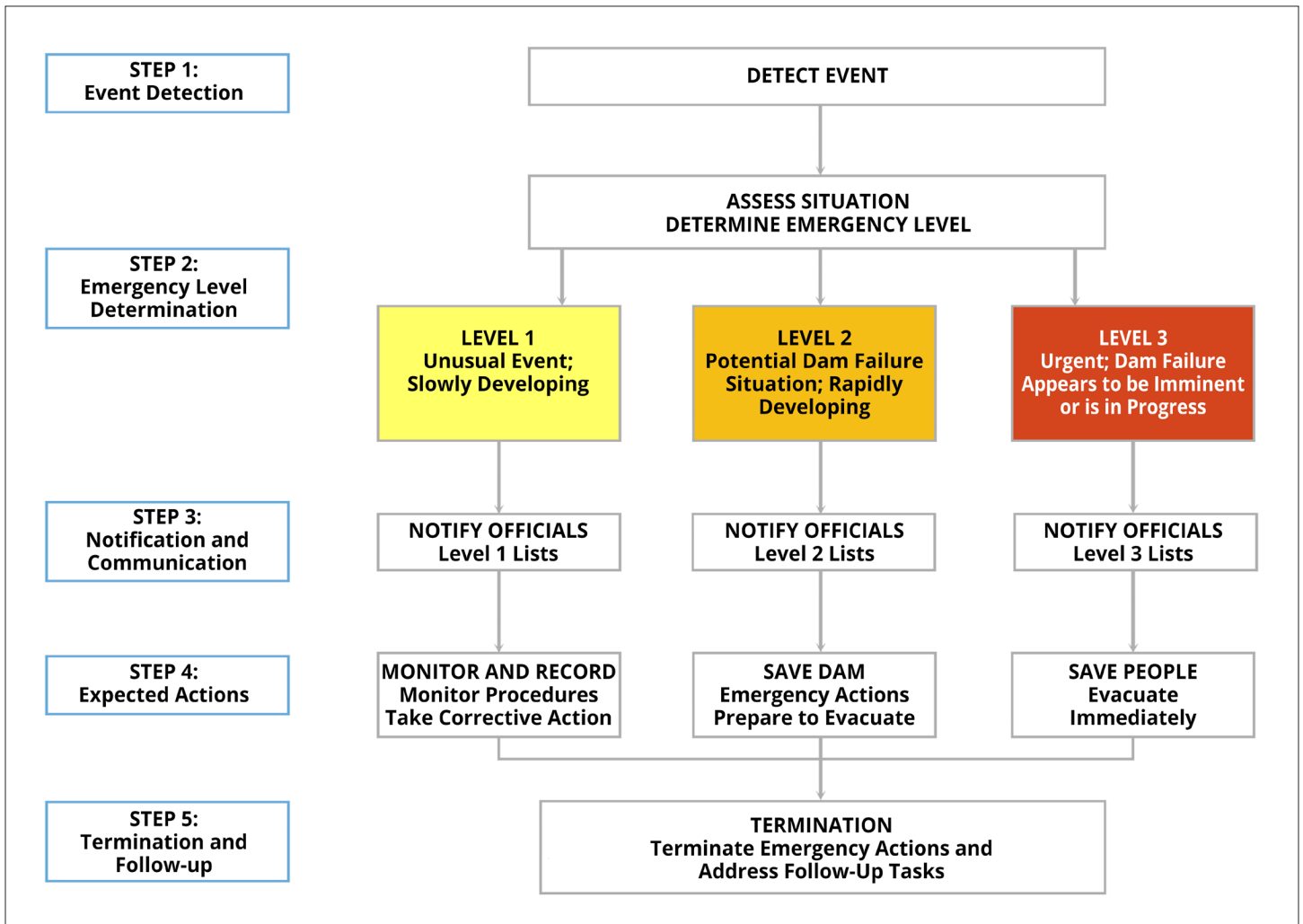


Figure 2. Emergency Action Plan Response Process chart

Emergency Detection, Evaluation, and Classification

Early detection is essential for timely emergency action. EAP activation should occur as soon as an emergency is suspected, rather than waiting for conditions to worsen.

- **Emergency Level 1:** A slowly developing event that may pose a risk if it continues. Dam experts should be consulted, and the situation should be monitored closely, especially during storms. Emergency management should be notified if the situation escalates.
- **Emergency Level 2:** A rapidly developing situation that may lead to dam failure. Emergency management and law enforcement should be notified and remain alert, while the dam operator monitors the situation and provides updates. Engineers should be contacted for possible remedial actions. Evacuations may be required if the condition worsens.

- **Emergency Level 3:** An imminent or ongoing dam failure. Downstream flash flooding is expected. Immediate notification of emergency responders is required to evacuate the public and close roads.

Emergency Operations Centers (EOCs) may be activated by local agencies to serve as coordination hubs for response, evacuation, and communication.

Responsibilities

Dam owners are responsible for developing, maintaining, and implementing the EAP. State and local emergency management officials manage public warnings and evacuations. The EAP must clearly define the responsibilities of the dam owner and other relevant officials to ensure prompt action in the event of an emergency. Additionally, the person authorized to notify state and local officials should be specifically identified within the EAP.

Designating a spokesperson or public information officer to communicate with the public and media ensures accurate and consistent messaging during emergencies. Plans should also include methods for maintaining contact with local officials and the EOCs as conditions evolve.

Preparedness

Preparedness actions help reduce the impact of dam emergencies. These include maintaining emergency supplies, testing equipment, and identifying vulnerable populations within the inundation area, such as individuals with disabilities, medical conditions, limited English proficiency, elderly residents, and young children.

Coordinating with state and local emergency management officials is vital to clearly define their roles in issuing warnings and managing evacuations. This cooperation also ensures that there are clear plans for communication, backup personnel, and procedures to handle emergencies during nighttime, weekends, and holidays.

Training

Ongoing training for dam operators and their representatives ensure they understand their roles and responsibilities during a dam emergency. Operators, along with local and county officials, should participate in routine EAP tabletop exercises to practice effective communication and prepare for realistic emergency scenarios.

Evacuation

State and local officials are responsible for planning and carrying out evacuations, but dam owners may need to alert individuals in areas not directly covered by authorities. The EAP should clearly outline these situations, specify who is responsible for issuing warnings, and set the order of priority for notifications.

Inundation Maps

Inundation maps, prepared by a licensed professional engineer, identify areas that would flood in the event of a dam failure. Maps should include travel times for wave fronts and flood peaks at critical locations to support



Figure 3. Emergency Action Plan training



Figure 4. Dam breach

evacuation timing and emergency planning. These maps must be accessible to both dam owners and emergency responders.

Appendices

Appendices include supporting documentation for the development and maintenance of the EAP. Typically, the following documents should be included:

- EAP Revisions and Update Log
- Contact Checklist
- Unusual or Emergency Event Log Form
- Dam Emergency Situation Report Form
- Available Resources List
- Location and Vicinity Map
- Dam Breach Inundation Map
- Locations at Risk Table
- Reservoir Elevation-Area-Volume and Spillway Capacity Data
- National Inventory of Dams (NID) Data
- Current Condition Assessment Data with Photos
- Plans and Drawings of the Dam

References

1. Federal Guidelines for Dam Safety Emergency Action Planning for Dams FEMA 64 / July 2013
2. Emergency Action Planning, Association of State Dam Safety Officials (ASDSO)



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