



Emergency Action Plan (EAP)

Bunch Lake Dam

DAM ID (NID) No. OK30595

Section 13, Township 7N, Range 3W

McClain County, OK

Owned by Attainment Investments, LLC



UNDERSTANDING AND BUILDING EFFECTIVE EMERGENCY ACTION PLANS

NWC Spring Workshop 2026

April 9, 2026



Facilitator Introductions



★ Preston Wilson ★

- President -

Resilience Solutions Consulting

What is an Emergency Action Plan?

- EAPs identify potential dam emergencies, define roles, and outline procedures to protect lives and property.
- They bridge dam-specific planning with community-wide response efforts.



The Core Purpose of an EAP

Reduce risk: Prevent human life loss and injury

Minimize damage: Protect Property and Infrastructure

Provide clarity: Help Owners and authorities classify conditions

Guide Action: Prescribe appropriate responses to specific events.



Bunch Lake EAP: Example Purpose

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Basic EAP Data

NIMS Compliance

The Emergency Action Plan (EAP) for Bunch Lake Dam shall be treated as any other emergency, if and when, it should arise. Anytime an emergency is identified at the dam, at any level, the Emergency Operation Center (EOC) should be spun up into operation and the National Incident Management System (NIMS) shall be invoked and strictly adhered to in dealing with the incident.

Purpose

The purpose of this Emergency Action Plan (EAP) is to reduce the risk of human life loss and injury and minimize property damage during an unusual or emergency event at Bunch Lake Dam. Bunch Lake is a small, privately-owned lake. The lake has been determined to be high-hazard because of its close proximity to State Highway 74 immediately downstream of the dam. This guide is intended to assist the owners of Bunch Lake and the McClain County Sheriff's Department to understand and classify anomalous conditions on the dam structure. These parties should review the document and gain a greater understanding of what the appropriate actions are to respond to an event. The lake is small, and a layman may dismiss any failures to have low consequences. An engineering and regulatory analysis has been performed, and it determined that the lake presents a high hazard in the unlikely event of failure. This risk is mitigated through annual inspection by the owner's technical representative who is the dam design engineer or other engineer familiar with the design and inspection of dams. It also is mitigated through periodic inspections by the owner of the dam who is the first line of defense in properly maintaining the dam and identifying developing anomalous conditions. The final mitigation is the development and annual review of an Emergency Action Plan. The dam owner, technical representative, Oklahoma Water Resources Board, and McClain County Sheriff should be involved in its development and review. The McClain County Sheriff's Department is trained and has experience in responding to emergencies and would be in charge in an emergency event. They accomplish this through the use of the Incident Command Structure (ICS). This is a nationally recognized system that serves as the standard for responding to emergencies. The McClain County Sheriff's department has been identified as having the appropriate resources and training. They will assign an Incident Commander (IC). This person will be responsible for contacting and acquiring the needed resources to respond to an event. It is anticipated that minimal resources will be needed due to a dam failure; however, this system ensures an orderly response.

Overview

Highway 74 has an average daily traffic of 5,000 vehicles and is considered a fairly busy roadway. The failure of the dam, especially in an unexpected manner, would cause immediate danger to motorists travelling down the roadway from the water failure wave and could easily wash them from the road. One residential structure and one business is expected to flood in the case of a dam failure, and possible damage



The 7 Steps to Success

1

Detect emergency situation.

2

Evaluate situation.

3

Classify situation.

4

Notify responsible parties.

5

Take emergency actions.

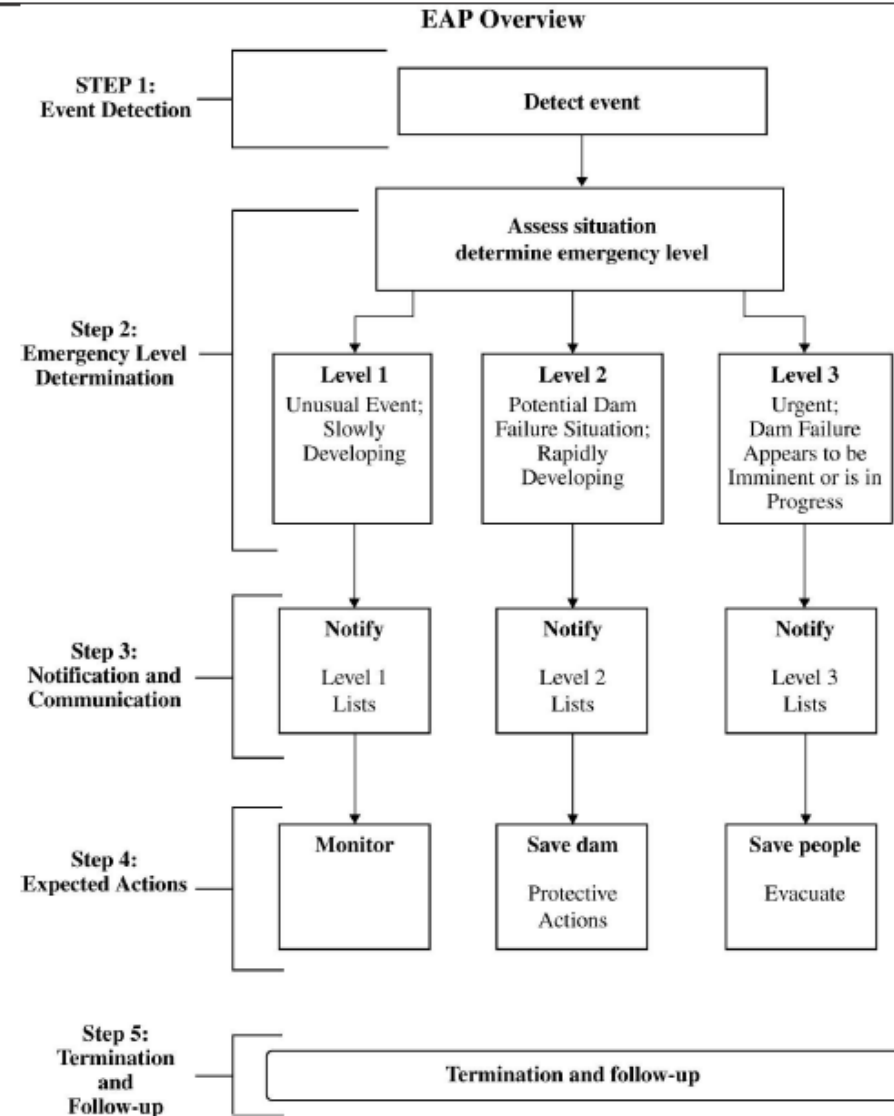
6

Terminate response.

7

Follow-up activities.

Bunch Lake EAP: The 5-Step EAP Process



Roles & Responsibilities



Dam Owners/ Sponsors

Detect and report
issues.



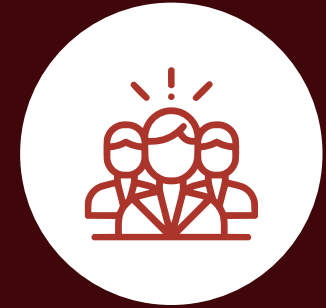
Emergency Managers

Lead notifications
and response
coordination.



Partners

Provide resources
and expertise.



Everyone

Communicate clearly
and act fast.

Bunch Lake EAP: Roles and Responsibilities

Roles and Responsibilities

Dam Owner (Attainment Investments, LLC)

- As soon as an emergency event is observed or reported, immediately determine the emergency level (see *Emergency Levels* tab).
 - Level 1: unusual event, slowly developing
 - Level 2: potential dam failure situation, rapidly developing
 - Level 3: dam failure appears imminent or is in progress
- Immediately notify the personnel in the order shown on the notification chart for the appropriate level (see *Notification Charts* tab).
- Provide updates of the situation to the police/sheriff dispatcher to assist them in making timely and accurate decisions regarding warnings and evacuations.
- Provide leadership to assure the EAP is reviewed and updated annually and copies of the revised EAP are distributed to all who received copies of the original EAP.

Incident Commander (McClain County Sheriff)

- Serve as the primary contact person responsible for coordination of all emergency actions.
- When a Level 2 situation occurs: Prepare emergency management personnel for possible evacuations that may be needed if a Level 3 situation occurs.
- When a Level 3 situation occurs:
 - Initiate warnings and order evacuation of people at risk downstream of the dam.
 - Notify local emergency management services to carry out the evacuation of people and close roads within the evacuation area (see *Evacuation Map* tab).
- Decide when to terminate the emergency.
- Participate in an annual review and update of the EAP.

Emergency Management Services (McClain County 9-1-1 Director)

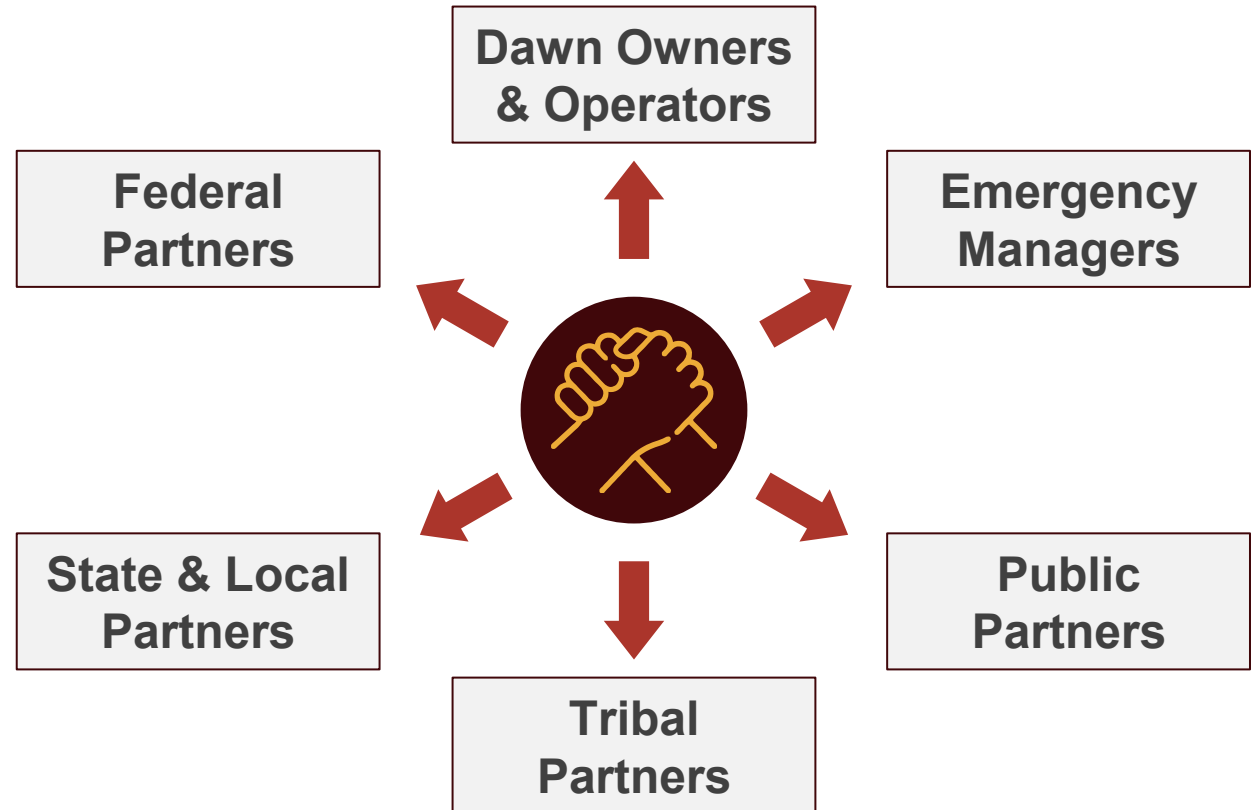
- Maintain communication with media.
- When a Level 2 situation occurs:
 - Prepare emergency management personnel for possible evacuations that may be needed if a Level 3 situation occurs.
 - Alert the public as appropriate.
- When a Level 3 situation occurs:
 - Alert the public.
 - Immediately close roads and evacuate people within the evacuation area (see *Evacuation Map* tab).
- Participate in an annual review and update of the EAP.

Dam Operator's Technical Representatives (Small Arrow Engineering)

- Advise the dam operator of the emergency level determination, if time permits.
- Advise the dam operator of remedial actions to take if a Level 2 event occurs, if time permits.

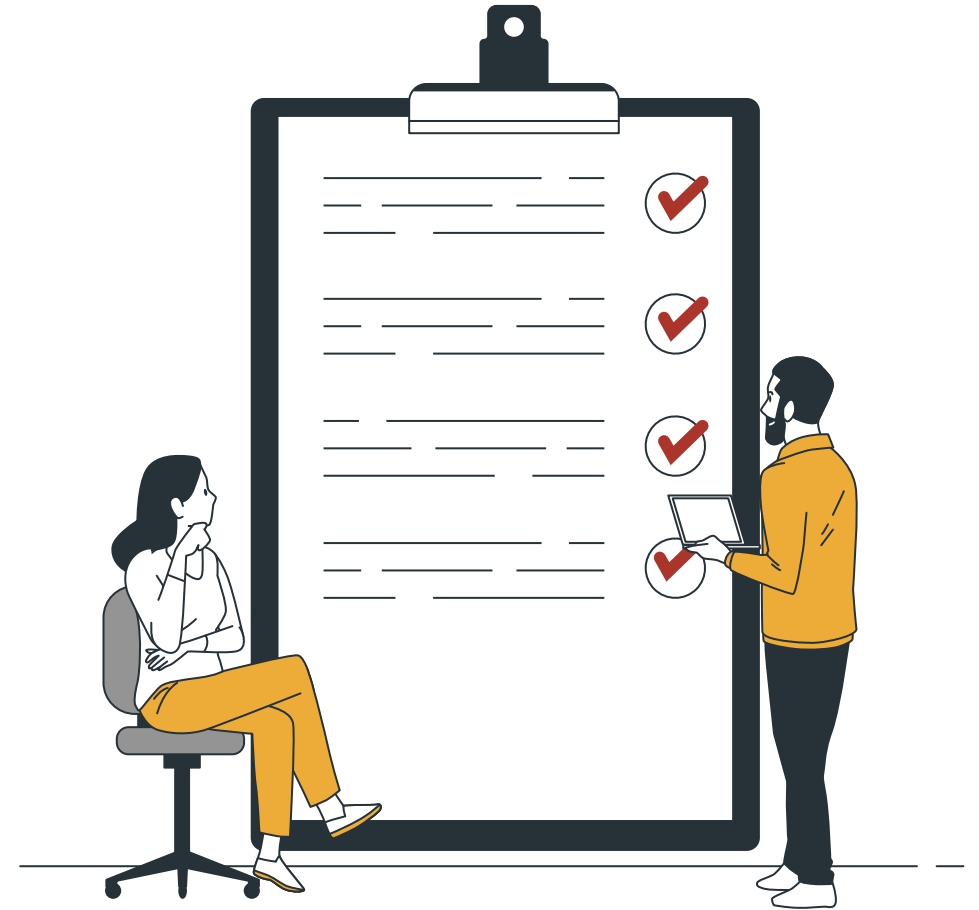
State Dam Safety Agency (Oklahoma Water Resources Board)

- Advise the dam operator of the emergency level determination, if time permits.
- Advise the dam operator of remedial actions to take if a Level 2 event occurs, if time permits.



Identifying Emergency Conditions

- **Level 1:** Nonemergency, unusual event, slowly developing.
- **Emergency Level 2:** Potential failure situation, rapidly developing.
- **Emergency Level 3:** Urgent; failure appears imminent or is in progress.



Bunch Lake EAP: Identifying Emergency

Step 2 Emergency Level Determination

After an unusual or emergency event is detected or reported, the Owner's technical representative or his alternate is responsible for classifying the event into one of the following three emergency levels:

Emergency Level 1—Nonemergency, unusual event, slowly developing:

This situation is not normal but has not yet threatened the operation or structural integrity of the dam, but possibly could if it continues to develop. The technical representatives should be contacted to investigate the situation and recommend actions to take. The technical representative will then contact the Oklahoma Water Resources Board. The condition of the dam should be closely monitored, especially during storm events, to detect any development of a potential or imminent dam failure situation. The Sheriff should be informed if it is determined that the conditions may possibly develop into a worse condition that may require emergency actions. Consideration should be given to staging water pumping equipment.

Emergency Level 2—Potential dam failure situation, rapidly developing:

This situation may eventually lead to dam failure and flash flooding downstream, but there is not an immediate threat of dam failure. The Sheriff should be notified of this emergency situation and placed on alert. The dam operator should closely monitor the condition of the dam and periodically report the status of the situation to the Sheriff. If the dam condition worsens and failure becomes imminent, the Sheriff must be notified immediately of the change in the emergency level to evacuate the people at risk downstream.

If time permits, technical representatives and state dam safety officials should be contacted to evaluate the situation and recommend remedial actions to prevent failure of the dam. The dam operator should initiate remedial repairs (note local resources that may be available—see Appendix B-1). Time available to employ remedial actions may be hours or days.

This emergency level is also applicable when flow through the earth spillway has or is expected to result in flooding of downstream areas and people near the channel could be endangered. Emergency services should be on alert to initiate evacuations or road closures if the flooding increases. Consideration should be given to staging barricades to close Highway 74 so that the road may be immediately closed by emergency personnel.

Emergency Level 3—Urgent; dam failure appears imminent or is in progress:

This is an extremely urgent situation when a dam failure is occurring or obviously is about to occur and cannot be prevented. Flash flooding will occur downstream of the dam. This situation is also applicable when flow through the earth spillway is causing downstream flooding of people and roads. The Sheriff should be contacted immediately so emergency services can begin evacuations of all at-risk people and close roads as needed (see *Evacuation & Inundation Maps* tab).

See the following pages for guidance in determining the proper emergency level for various situations.

Guidance for Determining the Emergency Level

Event	Situation	Emergency level*
Earth spillway flow	Reservoir water surface elevation at auxiliary spillway crest or spillway is flowing with no active erosion	1
	Spillway flowing with active gully erosion	2
	Spillway flow that could result in flooding of people downstream if the reservoir level continues to rise	2
	Spillway flowing with an advancing headcut that is threatening the control section	3
Embankment overtopping	Spillway flow that is flooding people downstream	3
	Reservoir level is 1 foot below the top of the dam	2
Seepage	Water from the reservoir is flowing over the top of the dam	3
	New seepage areas in or near the dam	1
	New seepage areas with cloudy discharge or increasing flow rate	2
Sinkholes	Seepage with discharge greater than 10 gallons per minute	3
	Observation of new sinkhole in reservoir area or on embankment	2
	Rapidly enlarging sinkhole	3

Notification Procedures



Emergency detection
(Unified messaging
across agencies)

Classification
(Level-specific contact
lists)

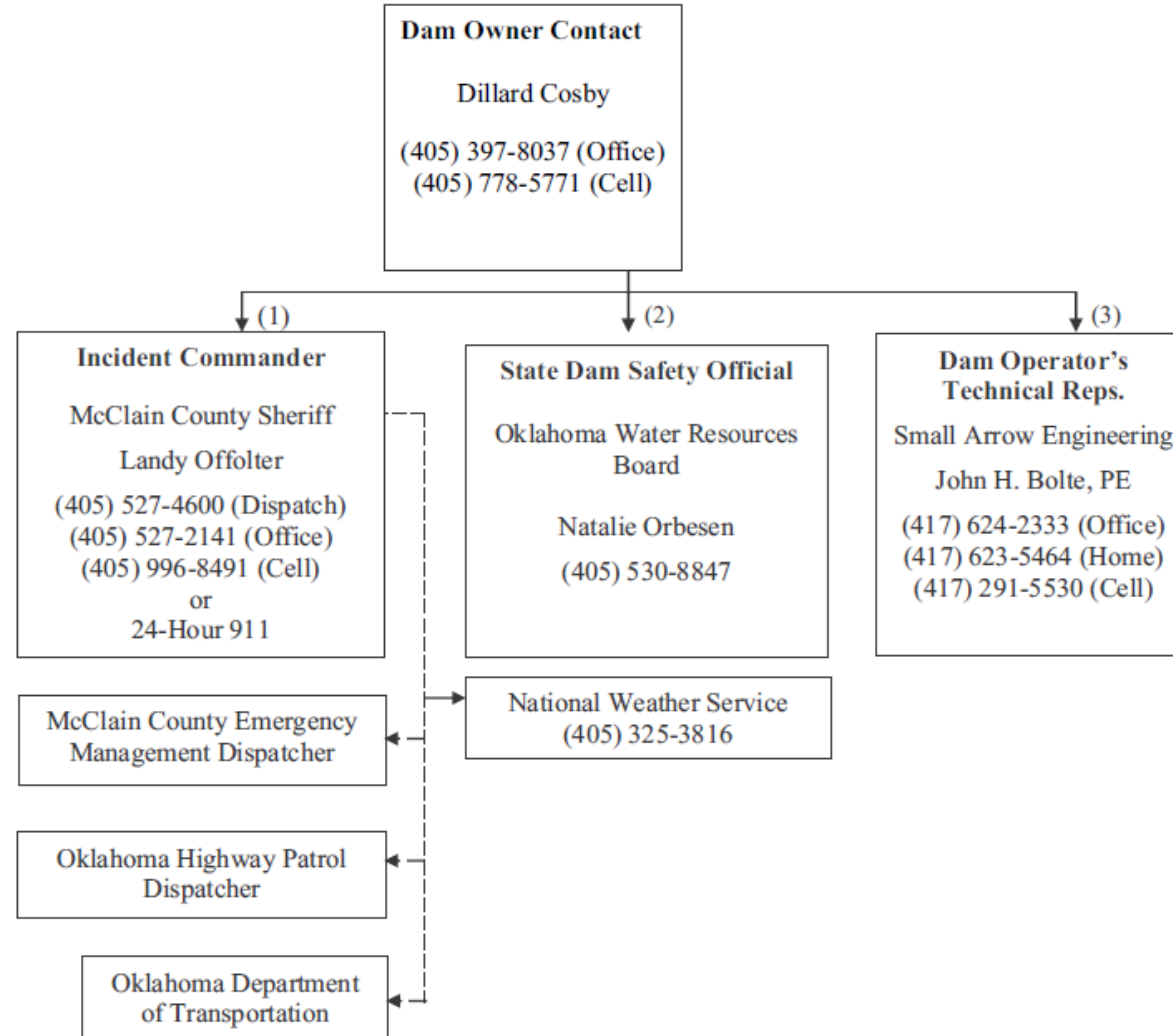
Communication flow
(Clear communication
flows)

Bunch Lake EAP: Notification Procedures

- Pre-planned notification flowcharts.

Emergency Level 3 Notifications

Urgent event, dam failure appears imminent or is in progress



Preparedness Actions

- Preparedness or responsive actions may include **lowering the reservoir, securing structures, and evacuating at-risk areas.**



Bunch Lake EAP: Preparedness Actions

Seepage and sinkholes

1. Continue lowering the water level until the seepage stops.
2. If the entrance to the seepage origination point is observed in the reservoir (possible whirlpool) and is accessible, attempt to reduce the flow by plugging the entrance with readily available materials such as hay bales, bentonite, soil or rockfill, or plastic sheeting.
3. Cover the seepage exit area(s) with several feet of sand/gravel to hold fine-grained embankment or foundation materials in place. Alternatively, construct sandbag or other types of ring dikes around seepage exit areas to retain a pool of water, providing back pressure and reducing the erosive nature of the seepage.
4. Prevent vehicles and equipment from driving between the seepage exit points and the embankment to avoid potential loss from the collapse of an underground void.



Inundation Area Maps

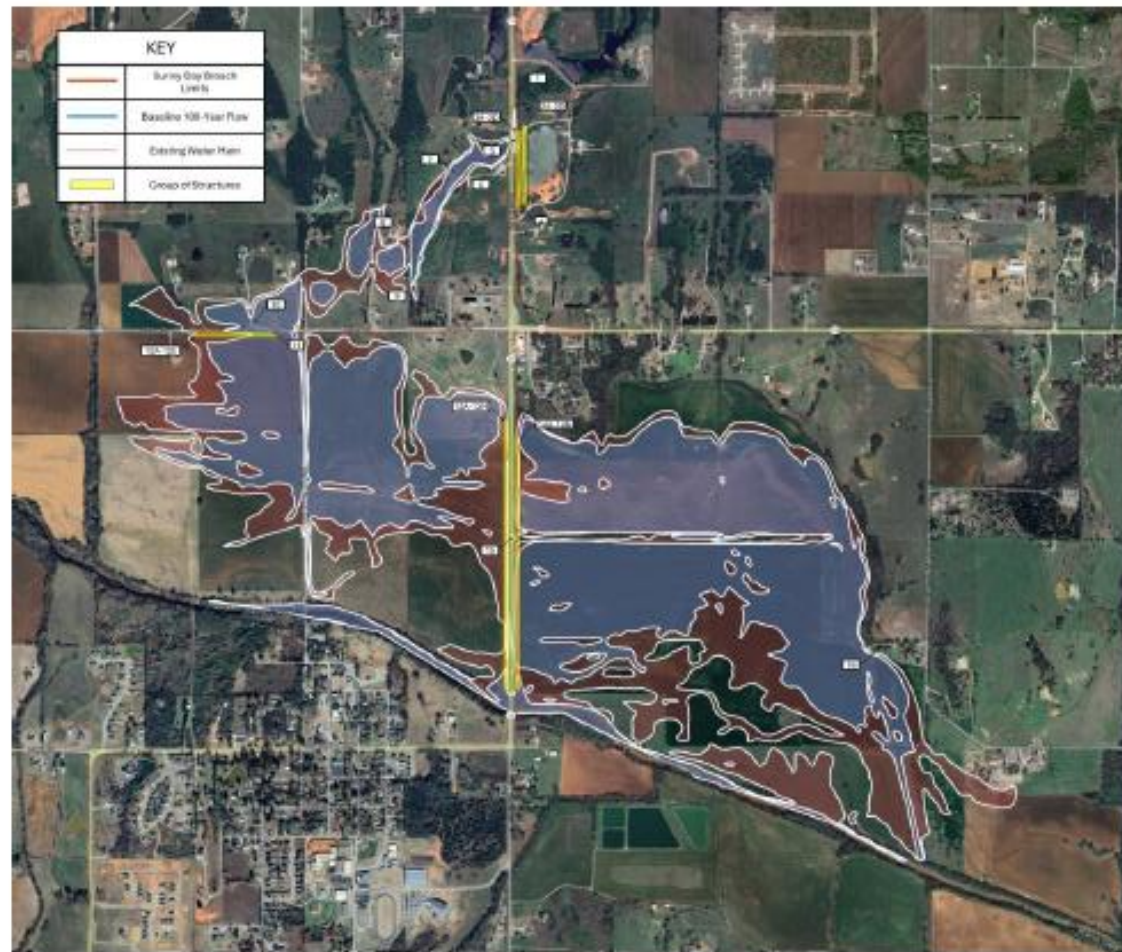
- Maps show potential flood areas and travel times.
- They inform **but do NOT replace** evacuation planning.
- Identifying impacted utilities and critical infrastructure.



Bunch Lake EAP: Inundation Map

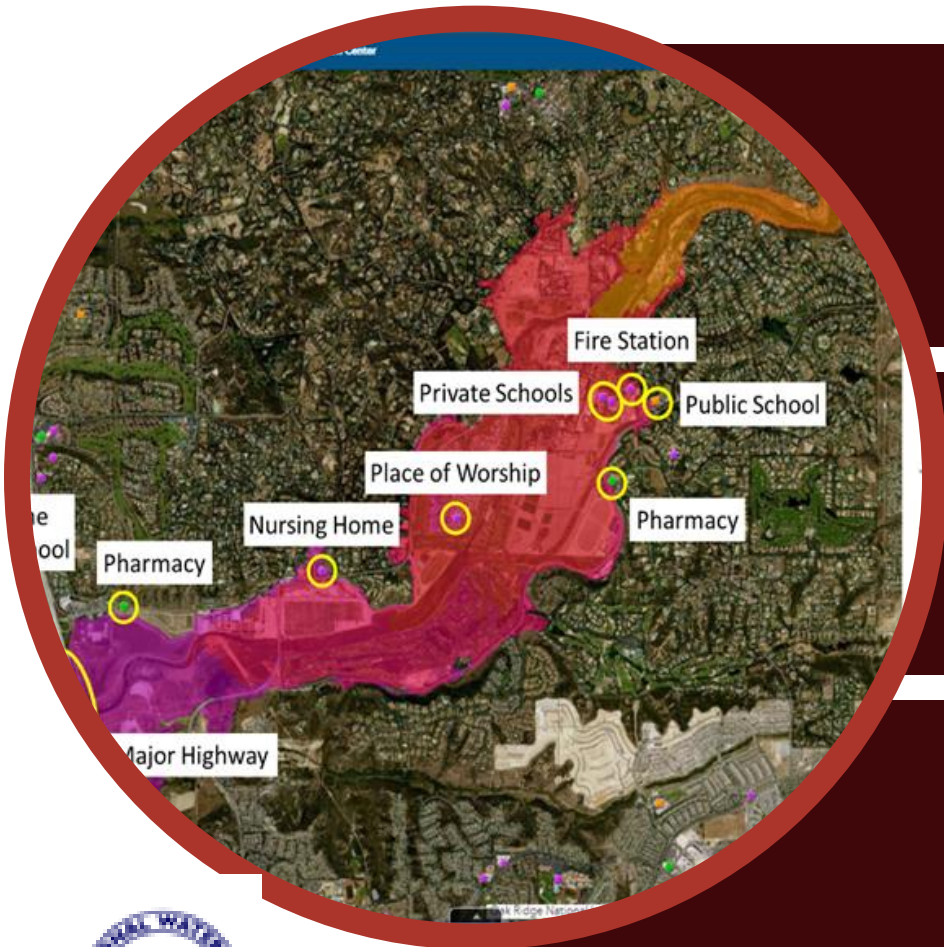
Appendix B-4 Evacuation & Inundation Maps

Overall Evacuation Map



The EAP Informs Evacuation Planning

- Designated lead agency for evacuations.
- Identification of structures at risk.
- Estimated flood wave travel times.



Bunch Lake EAP: Assisting Evacuation Planning

Appendix B-5 Structures at Risk

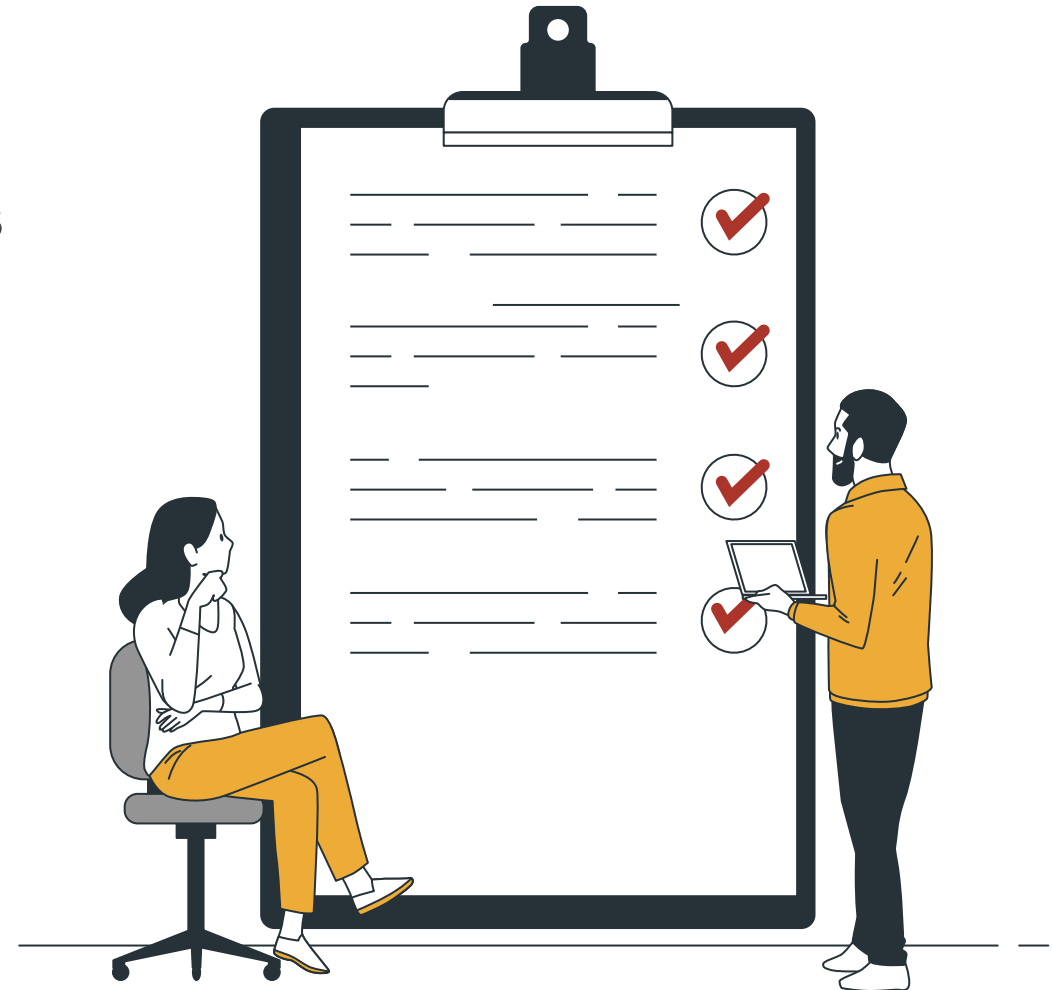
A major flood caused by a sudden breach of the dam is estimated to inundate one home, one business, one highway, and one street. These homes and businesses (marked on the Overall Evacuation Map) are located within the Sunny Day Breach Limits. Note that not every structure within the Sunny Day Breach Limits is expected to be flooded, and only the structures with a maximum water depth above the first floor are listed in the High-Risk Structure Summary.

Overall Evacuation Map Summary

Structure No.*	Structure Type
1	Water Main
2A-2D	Power Pole (3-Phase)
3A-3D	Power Pole (3-Phase)
4	HV Power Pole
5	HWY 74 Culvert (North)
6	Coffee Shop
7	Driveway Culvert
8	Residence
9	Barn
10	Barn
11	250 th St Culvert
12A-12E	Power Pole (3-Phase)
13A-13M	Power Pole (3-Phase)
14A-14N	Power Pole (3-Phase)
15	HWY 74 Culvert (South)

Resource Inventory

- Locating necessary supplies before an event.
- Building a database of local contractors and equipment.



Bunch Lake EAP: Resource Inventory

Appendix B-1 Resources Available

Locally available resources include:

Heavy equipment service and rental	Sand and gravel supply	Ready-mix concrete supply
Ten Arrows Contracting 4812 North Rockwell Ave Suite #1 Blanchard, OK 73010 405-778-5771	Robbie Hyde (Riverside Sand & Gravel) 3525 SE 40 th St. Newcastle, OK 73072 405-620-5314 rjhyde@windstream.net	Genesis Concrete Co. 5421 SE 40 th St. Norman, OK 73072 405-392-3360 Van Eaton Ready Mix 17301 S Sunnyslane Rd. Norman, OK 73071 405-912-4825
Pumps	Diving contractor	Sand bags
Ten Arrows Contracting 4812 North Rockwell Ave Suite #1 Blanchard, OK 73010 405-778-5771	Ten Arrows Contracting 4812 North Rockwell Ave Suite #1 Blanchard, OK 73010 405-778-5771	Robbie Hyde (Riverside Sand & Gravel) 3525 SE 40 th St. Newcastle, OK 73072 405-620-5314 rjhyde@windstream.net

Training

- Ensuring responders understand the plan.
- Building experience through coordinated response efforts.



- Utilizing recognized frameworks like the Incident Command System (ICS).

Bunch Lake EAP: Training

NIMS Compliance

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Exercises and Plan Maintenance



Exercises validate plans and identify improvement areas.



Use tabletop or functional drills to test response readiness.

Bunch Lake EAP: Exercise

EAP periodic test

The Owner will host and facilitate a periodic test of the EAP at least once every 5 years.

The periodic test will consist of a meeting, including a tabletop exercise, conducted at a location convenient to all parties. Attendance should include the Dam owner, the Owner's Technical Representative, at least one representative of the local law enforcement agency, and others with key responsibilities listed in the EAP. At the discretion of the Dam Owner, other organizations that may be involved with an unusual or emergency event at the dam are encouraged to participate. Before the tabletop exercise begins, meeting participants will visit the dam during the periodic test to familiarize themselves with the dam site.

The tabletop exercise will begin with the facilitator presenting a scenario of an unusual or emergency event at the dam. The scenario will be developed prior to the exercise. Once the scenario has been presented, the participants will discuss the responses and actions that they would take to address and resolve the scenario. The narrator will control the discussion, ensuring realistic responses and developing the scenario throughout the exercise. The Owner should complete an event log as they would during an actual event.

After the tabletop exercise, the five sections of the EAP will be reviewed and discussed. Mutual aid agreements and other emergency procedures can be discussed. The Dam Owner or Owner's Technical Representative will prepare a written summary of the periodic test and revise the EAP, as necessary.



Questions?

Final Whistle

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Stay ready. Stay resilient.

**THANK YOU
FOR JOINING!**

