APPENDIX A

Example Emergency Action Plan for a Large Dam

(NAME) DAM

TX0####

EMERGENCY ACTION PLAN

Date

Prepared for

(Name)

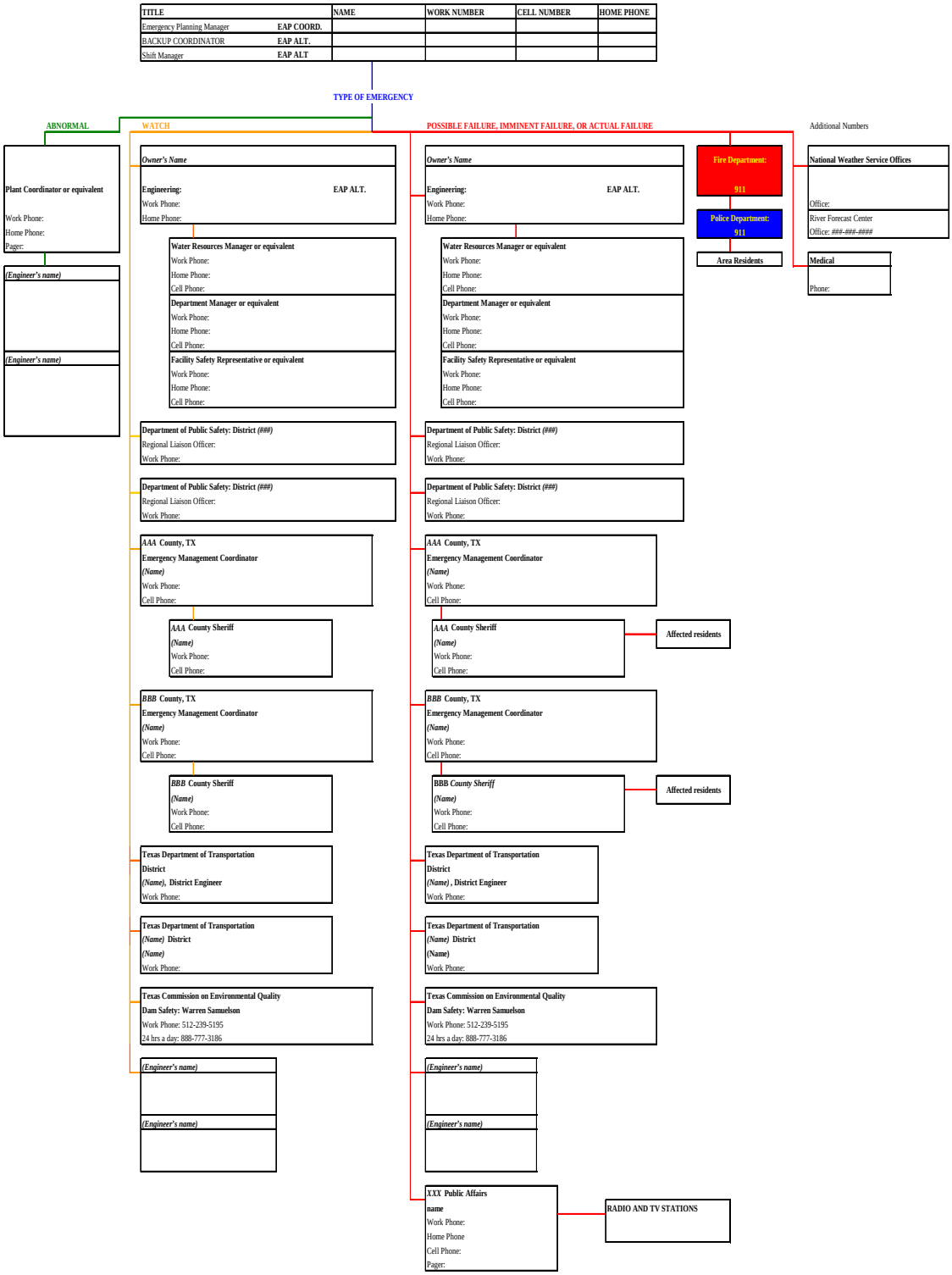
Prepared by

(Name)

Emergency Action Plan
(Name) Dam
(Owner), Inc.

CONTENTS

NOTIFICATION FLOWCHART



(NAME) DAM
LOG SHEET OF CHANGES

Date	Change Made	Signature

APPROVAL AND IMPLEMENTATION

EMERGENCY ACTION PLAN

(NAME) DAM

This Emergency Action Plan is hereby approved. This plan is effective immediately and supersedes all previous editions.

Name and Title of Emergency Planning Manager	Date
Name and Title of Appropriate Manager for Owner	Date

EMERGENCY ACTION PLAN

(NAME) DAM

1. Introduction

(Name) Dam and Reservoir are owned and operated by *(Owner)*. It is located on *(Stream)* in *(Name)* County, approximately *(##)* miles *(direction)* of *(City)*, Texas. *(Stream)* is a tributary of the *(Name of Main Tributary)*, located in the *(Name)* River Basin. The dam was completed in *(year)* and was constructed under Permit No. *(####)*, Application No. *(####)*, granted by the Texas Water Rights Commission to Owner in *(year)*. The lake was constructed to serve as *(purpose)*.

According to the *(Name)* Dam Breach Analysis (Tab 10), if a breach of the dam were to occur, a *(##)*-foot opening could form in as little as *(##)* minutes. The subsequent flood wave would flow downstream through the floodplain of *(Name)* with significant effects on the *(Stream)* and the *(Stream)*. A breach of the dam has the potential to result in the loss of human life and loss of property.

1.1 Authority

The Texas Commission on Environmental Quality (TCEQ) is the regulatory agency responsible for the dam-safety laws in Texas. The primary goal of the state's dam-safety program is to save lives and reduce property damage that may result from a dam failure. The development and implementation of an Emergency Action Plan (EAP) is a positive step dam owners can take to accomplish dam-safety objectives, to protect their investment, and to reduce the potential liability associated with a dam failure. Title 30, Texas Administrative Code, Chapter 299, gives the state the authority to direct the owner of a dam, pursuant to Texas Water Code 12.052, to take immediate and appropriate action to remedy situations posing serious threat to human life or health, or risk of property damage. In addition, the following authorities formulate organization and operational concepts for emergency planning:

Texas Disaster Act of 1975, Executive Order of the Governor (GWB 95-1a).

Guidelines for Operation and Maintenance of Dams in Texas, Texas Commission on Environmental Quality, November 2006. Publication no. GI-357.

1.2 Purpose

The purpose of this Emergency Action Plan is to identify emergency situations that could threaten *(Name)* Dam, and to plan for an expedited, effective response to prevent failure of the dam. This plan defines the notification procedures to be followed in the event of a potentially hazardous situation or the potential failure of the dam. The procedures are intended to protect lives and prevent property damage from an uncontrolled release of water from the reservoir.

2. Project Description

2.1. General *(example—modify as necessary)*

(Name) Reservoir has a drainage area of approximately *(##)* square miles, and is designed to be operated at a normal pool elevation of *(##)* feet msl. The storage capacity of the reservoir at the normal operating level is *(######)* acre-feet.

The dam is a *(####)*-foot-long zoned earth-fill embankment with a *(##)*-foot-wide crest. The top of the dam is at elevation *(####)* feet msl and has a maximum height above the streambed of *(####)* feet. The upstream and downstream slopes are *(#)* horizontal to 1 vertical. The upstream slope is protected with rock riprap and the downstream slope is a random and rock-fill zone with sparse vegetation.

The service spillway is composed of an uncontrolled concrete ogee structure with a crest elevation of *(###)* feet msl. The width of the spillway is *(####)* feet. Flow over the spillway is discharged into a conventional stilling basin with a floor elevation of *(###)* feet msl containing chute blocks and an end sill. The width of the basin is *(####)* feet and the total length of the chute and basin is *(####)* feet from the crest.

The emergency spillway is located at the left end of the dam and is an excavated, broad-crested weir measuring (####) feet in width, with a crest elevation of *(####)* feet msl.

2.2. Reservoir Operations *(example—modify as necessary)*

Releases from the reservoir are uncontrolled.

3. Responsibilities

3.1. Emergency-Response Procedures

When conditions at the dam have caused the declaration of an emergency, actions are to begin immediately with the notification of the *(title of dam emergency planner)*. An Emergency Operations Center will be set up in the *(office or location)* to monitor the progression of the situation and to coordinate remediation activities. Alternate phone numbers are available. Provisions for light may be necessary due to darkness, and alternate access to the dam from both sides should be available.

Immediately upon determination of a "watch" or more serious condition, this Emergency Action Plan will be implemented. Surveillance of the problem will be maintained on a 24-hour basis. The Department of Public Safety Regional Liaison office; the *AAA* County, *BBB* County, and *CCC* County civil emergency-management officials; the owner's engineer; and the TCEQ Dam Safety Program will be notified according to the Notification Flowchart by the *(title of dam emergency planner)*. The following are possible actions at the dam to prevent or delay failure after an emergency is first discovered:

Seepage Failure

1. Plug the flow with whatever material is available (hay, bentonite, or plastic) if the entrance is in the reservoir.
2. Lower the water level in the reservoir by using the low-flow outlet and pumping if necessary, until the flow decreases to a non-erosive velocity or until it stops. Place an inverted filter (a protective layer of sand and gravel) on the exit area to hold the material in place.
3. Continue operating at a lower level until a repair is made.

Embankment or Foundation Sliding

1. Lower the water level in the reservoir by pumping if necessary at a rate and to an elevation considered safe, given the slide condition.
2. Stabilize the slide, if on the downstream slope, by weighting the toe area below the slide with soil, rock, or gravel.
3. Continue operating at a lower level until a repair is made.

Structural Failure

1. Implement temporary measures to protect the damaged structure, such as placing rock riprap in the damaged area.
2. Lower the water level to a safe elevation through the low-flow release valve and by pumping if necessary.

Preventive measures can be taken in an emergency to prevent the catastrophic failure of the dam, but such repairs should be undertaken with extreme caution. The repairs are only temporary, and a permanent repair should be designed by an engineer as soon as possible.

3.2. Responsibilities for Notification

The *(title of dam emergency planner)* shall make all initial notifications. As indicated in Section 5, technical advice shall be sought when time allows. However, for rapidly developing situations, immediate notification of the Department of Public Safety Regional Liaison office and the *AAA* County, *BBB* County, and *CCC* County civil emergency-management officials may be necessary for quick action. Sample notification messages appear in Tab 3. The county officials will in turn notify local law-enforcement officials for appropriate action. The *(Owner)* public-affairs representative will issue news releases. Sample news releases appear in Tab 4.

3.3. Responsibilities for Evacuation

Local law-enforcement officials shall be responsible for evacuating residents in the event of a dam emergency. After notification by the *(title of dam emergency planner)* through the Department of Public Safety Regional Liaison office and the *AAA* County, *BBB* County, and *CCC* County civil emergency-management officials, local law-enforcement officials will be responsible for the warning and evacuation of people in the threatened areas.

3.4. Responsibilities for Duration, Security, Termination, and Follow-up

The *(title of dam emergency planner)* or his or her designated representative will be responsible for on-site monitoring of the situation and for keeping local authorities informed of developing conditions at the dam from the time that an emergency starts until it ends. Local law-enforcement agencies shall maintain security at the dam. The *(title of dam emergency planner)* shall be responsible for declaring the situation terminated and for a follow-up evaluation of the emergency.

3.5. Plan Coordinator

The *(title of dam emergency planner)* who takes care of the day-to-day operations of the dam is responsible and has the authority to implement and carry out all procedures and surveillance found in this Plan. He shall be responsible for initiating the notification procedures when signs of distress or failure are noted. All participating parties should be familiar with this plan and their responsibilities during an emergency. Precautionary measures shall be taken to prevent the uncontrolled release of water from the reservoir. In the event that a failure is imminent, proper notification of persons in the downstream area shall be made. Any resources available to the *(title of dam emergency planner)* shall be used to minimize uncontrolled releases. The *(title of dam emergency planner)* alternates listed on the Notification Flowchart shall implement and carry out these procedures in his absence.

3.6. Emergency Operations Center

In the event of a "watch" or more serious condition, the *(title of dam emergency planner)* shall activate the Emergency Operations Center for the overall direction and response activities. The Emergency Operations Center shall be established at the (location of office). The *(title of dam emergency planner)* will be responsible for initiating actions from this location.

3.7. Communications

Local officials and downstream residents will be notified by landline telephone, if available; otherwise via cell phones or emergency personnel (in person or using their radios). The various radio networks for emergency use include the informal ham-radio network, and networks belonging to:

- The AAA County Sheriff's office
- The BBB County Sheriff's office
- The CCC County Sheriff's office
- The Texas Department of Public Safety
- The Texas Department of Transportation

Sample notification messages appear in Tab 3. Verification or authentication of the situation can be made by contacting the Department of Public Safety Regional Liaison office and the *AAA* County, *BBB* County, and *CCC* County civil emergency-management coordinators. Television and radio can be used as much as possible to notify area residents of the possible dangers. **Sample news releases appear in Tab 4.** News releases are to be issued by the *(Owner)* public-affairs officer. The following summarizes the notification procedures for different levels of alert:

"Abnormal" Condition

1. The *(title of dam emergency planner)* will be notified.
2. The *(title of dam emergency planner)* will notify officials at corporate headquarters.
3. *(Owner)* will contact *(Owner's engineer)* to inspect the situation.

"Watch" Condition

1. The *(title of dam emergency planner)* will notify the Department of Public Safety Regional Liaison office and officials at corporate headquarters.
2. *(Owner)* will contact *(Owner's engineer)* to inspect the situation.
3. A "watch" message will be issued by local emergency management officials to downstream contacts, if so directed by *(Owner)* officials.
4. State dam safety officials will be notified by *(Owner)* officials.

Possible Dam Failure

1. The *(title of dam emergency planner)* will notify the Department of Public Safety Regional Liaison office and the *AAA* County, *BBB* County, and *CCC* County civil emergency-management officials, *(Owner)* officials, and representatives of the Texas Department of Transportation (*XXX* and *YYY* Districts).
2. *(Owner)* will contact *(Owner's engineer)*.
3. Local emergency-management officials will send a "possible dam failure" warning message to downstream residents, if so directed by *(Owner)*.
4. *(Owner)* will notify state dam-safety officials.

Imminent Dam Failure

1. The *(title of dam emergency planner)* will notify the Department of Public Safety Regional Liaison office and the *AAA* County, *BBB* County, and *CCC* County civil emergency-

management officials, *(Owner)* officials, and representatives of the Texas Department of Transportation.

2. *(Owner)* officials will contact *(Owner's engineer)*.
3. Local emergency-management officials will issue a "failure" message to downstream residents and evacuation programs shall begin.
4. *(Owner)* will notify state dam-safety officials.

The *(title of dam emergency planner)* shall ensure notification of personnel in the event of an emergency at the dam, and may delegate contacting some personnel to other *(Owner)* personnel. The delegation of contacts should be very specific as to which ones are to be made. The Notification Flowchart at the beginning of this report contains contact information for *(Owner)* staff, as well as the other officials which may be involved in the event of a situation at the dam.

4. Possible Emergency Conditions

4.1. Situations

Many dam conditions can lead to emergency situations, not all of which will necessitate the implementation of the Emergency Action Plan; however, if any of them occur, the appropriate action must be taken.

- **Severe storms:** Although generally not in themselves a threat to the dam, severe storms can contribute to an existing problem and hinder any remediation efforts. Severe storms also cause the uncontrolled release of floodwater, and increase flow in already rain-swollen areas.
- **Earthquakes:** *(Dam Name)* is located in a seismic zone with low activity. An earthquake is, however, a possibility, and appropriate post-earthquake inspections should be performed.
- **Tornadoes:** Tornadoes do occur in the area, with the potential for structural damage to the dam, possibly resulting in its failure. If a tornado has struck in the area, an inspection of the dam for any signs of damage will be appropriate.
- **Sabotage:** A threat to damage the dam has been made. Appropriate actions must be taken to protect the dam.

4.2. Signs of Failure

The following sections describe some of the different types of failure which could lead to a dam breach. The impacts of a dam breach have been evaluated and the results are included in this report.

- **Seepage Failure:** Although all earthen embankments allow some minor seepage through the dam or the foundation, excessive, uncontrolled seepage can result in piping (or the movement of embankment material in the seepage flow) and lead to failure. Piping can occur for years at a slow rate. If the piping has progressed to a dangerous level, it will be evident by increased flow or the discharge of muddy water (or both). At that stage, immediate action to stop the piping is needed. Fully developed piping is difficult to control and is very likely to result in failure. A whirlpool in the reservoir is a sign of uncontrollable piping and necessitates immediate emergency action.
- **Embankment or Foundation Sliding:** Sliding is usually first apparent when cracks or bulges in the embankment appear. Slides with progressive movement can cause failure of the embankment.

- **Structural Failure:** The structural failure or collapse of any portion of the service spillway or spillway gates could result in loss of the reservoir. A structural failure of a portion of the spillway could cause piping and possibly embankment failure.
- **Overtopping Failure:** Overtopping of the embankment results in erosion of the dam crest. Once erosion begins, it is very difficult to stop. [If *(Dam Name)* passes 100 percent of the Probable Maximum Flood, an overtopping failure need not need be considered.]

4.3. Previously Known Problems

(Identify any known problems.)

4.4. Emergency Identification

A. Signs of Failure

In an emergency, the *(title of dam emergency planner)* is responsible for the dam's operation, maintenance and inspection. The early identification of potentially dangerous conditions can allow time for the implementation of emergency action plans. It is important to understand how distress can develop into failure. With appropriate action, distress need not lead to a catastrophic failure of the dam. Early identification, close monitoring, planned action and remedial measures will help alleviate a potentially dangerous situation. The following sections describe some of the different levels of distress which could lead to a dam breach.

B. "Abnormal" Conditions

The conditions listed below are not normal occurrences. These conditions, as well as those listed in the next three sections, are summarized in Tab 2, along with recommended actions. When these conditions are present, they should be noted, and action should be taken to prevent the possible failure of the dam.

- piping or boils in the area of any structure such as the embankment, spillway, or in the vicinity of the toe of the embankment, as evidenced by muddy water
- slides or sloughs in the embankment, discharge channel or abutments
- a significant increase in seepage quantities through or under the embankment, abutments or emergency spillway
- unusual vertical or horizontal movement or cracking of the embankment or abutments
- small sinkholes or subsidence within 500 feet of the embankment or spillway
- excessive displacement of the soil cement on the embankment slope
- an earthquake
- a severe storm
- a tornado
- threat of sabotage

In the event that any of these items are observed, the *(Owner's engineer)* should be contacted to inspect the dam to document the distress and determine whether remedial action is necessary. Notification of local authorities is not necessary for "abnormal" conditions.

C. "Watch" Conditions

A "watch" indicates that a significant problem that may potentially progress to a dangerous situation has been detected, but that a breach is considered unlikely and no flooding is imminent.

This situation will require monitoring and repair or correction as soon as possible. Upon detection, the notification procedures must be implemented in accordance with the instructions in Tab 2. The *(title of dam emergency planner)* shall institute all practicable measures to mobilize personnel to control the situation. The following is a list of conditions which constitute "watch" conditions:

- small boils if conditions are muddy, on the downstream slope of the embankment or downstream from the toe, or if there is flowing muddy water downstream from the embankment
- large sinkholes with corresponding seepage anywhere on the embankment or downstream from the toe
- any slide that degrades the crest of the embankment or that is progressively increasing in size
- significantly increasing seepage or flow
- cracking or movement of any concrete structure
- the engagement of the emergency spillway

D. Possible Dam Failure

A "possible dam failure" warning is issued when a "watch" condition is becoming progressively worse, and a dam failure is considered possible. The *(title of dam emergency planner)* will immediately notify the Department of Public Safety Regional Liaison office and city and county emergency-management officials and others in accordance with the Notification Flowchart. He or she will continue all practicable measures to correct the problem, including lowering the reservoir level if appropriate. The existence of any of the following conditions constitutes possible dam failure:

- large boils, increasing in size and flow rate, especially if there is flowing muddy water
- significantly increasing seepage, especially flowing muddy water
- slides involving a large mass of material that impairs the crest of the dam and is continuing to move
- sinkholes with seepage flowing muddy water
- large cracks, movement or failure of a portion of any major concrete structure that forms an integral part of the dam
- an increase in the reservoir level to near the top of the dam
- overtopping of a concrete dam that is not designed for overtopping

E. Imminent Dam Failure

"Imminent failure" is the determination that a "warning" condition will most likely progress to a failure of the dam and the reservoir will be uncontrollably released, regardless of the actions taken. When this determination is made, immediate notification and warning of downstream areas becomes the primary concern. The existence of any of the following conditions constitutes imminent failure:

- rapidly increasing boils or the presence of new, significantly flowing boils, particularly muddy ones near previously identified ones
- rapidly increasing seepage, especially flowing muddy water

- slides involving a large mass of material or which have degraded the crest of the embankment to a level that approaches the water surface level, or if significant seepage is observed through the slide area
- settlement that is predicted to degrade to the reservoir level
- cracks that extend to the reservoir level
- significant movement or failure of any major concrete structure that forms an integral part of the dam
- overtopping of an earthen dam

5. Preventive Actions

This section lists the conditions and actions which may be used to classify the level of emergency response, as a guide for *(Owner)* personnel.

5.1. Abnormal Condition

Periodic inspections of the dam by *(titles of personnel making inspections)* will evaluate its structural safety, stability, and operational adequacy. If *(Owner)* personnel who visit the dam site notice visual evidence of distress, the structure should be inspected by a registered engineer specializing in dam design and construction. In the event of an abnormal occurrence, such as a tornado, earthquake, or unusually heavy rainfall, special inspections by an engineer of the embankment and spillway are warranted. An abnormal condition can generally be repaired or corrected in the next few months with no immediate action necessary.

5.2. "Watch" Condition

If a problem has been detected at the dam which requires constant monitoring or immediate action to repair and the condition is manageable by *(Owner)* staff, a "Watch" condition exists. A "watch" will continue until the problem is corrected or a "possible dam failure" warning is issued. The *(title of dam emergency planner)* should notify the Texas Department of Public Safety Regional Liaison office and state dam-safety officials.

5.3. Possible Dam Failure

A "watch" condition that is progressively getting worse is considered a possible dam failure. Efforts to correct the situation will continue, and—although there is no imminent danger—if conditions continue to deteriorate, a dam failure could occur. A "possible dam failure" condition generally has already involved extensive efforts by *(Owner)* personnel and potentially other contractors. A "possible dam failure" condition will continue until the problem is corrected, or until an "imminent dam failure" warning is issued. Notifications have been issued and local law-enforcement personnel are ready to begin evacuation of threatened areas.

5.4. Imminent Dam Failure

If the *(title of dam emergency planner)* has determined that the condition at the dam will continue to progress to failure and result in the uncontrolled release of water, an "imminent dam failure" condition exists. Dam failure will most likely occur regardless of what actions are taken. Numerous forces are involved in trying to correct the situation. Evacuation has begun and will continue until the situation is stabilized.

5.5. Dam Failure

A dam failure has occurred and a flood wave is moving downstream. Flooding will occur immediately and will continue to move downstream until water levels in the reservoir are stabilized. Considerable destruction can be expected, and evacuation of low-lying areas should continue.

5.6. Other Considerations

Alternate Access

Alternate access routes should be planned in the event of an emergency at the dam. The access road which runs along the crest of the dam is reachable from SH *(##)* on the north and from *(Name of Road)* on the south.

Darkness

In a nighttime emergency, the *(title of dam emergency planner)* should arrange for access to generators and lights to adequately monitor the situation.

Adverse Weather *(example—modify as necessary)*

The road across the dam is a gravel roadway with grassed edges which should allow discharge across the road as the emergency spillway does. The north and east alternate routes should be used instead under such conditions. All-weather access to the downstream toe of the dam will also be unavailable. For developing situations near the downstream toe of the dam, gravel may need to be brought in to stabilize a road in that area.

6. Supplies and Resources

6.1. Contracts

Should *(Owner)* personnel and resources prove to be inadequate during an emergency, requests will be made for assistance from other local jurisdictions, other agencies, and industry, as needed. Such assistance may include equipment, supplies, or personnel. All agreements will be entered into by authorized officials and should be in writing whenever possible. The *(title of dam emergency planner)* shall have the authority to enter into agreements as deemed necessary to prevent the failure of the dam.

6.2. Equipment and Supplies

Equipment which is available for use in the event of an emergency includes the equipment listed in Tab 5. Other contractors in the area may be needed. Possible contractors are listed in Tab 6.

6.3. Reports

Technical Data

Periodic inspections of the dam will be made to evaluate its structural safety, stability, and operational adequacy. In the event of an abnormal occurrence, reference to these reports, particularly the photographs, can be beneficial in the evaluation of a potential problem.

Technical records such as drawings and inspection reports should be stored and carefully maintained at the *(Owner)* Site offices. Alternate personnel shall be familiar with the location of the documents in the event of an emergency situation.

Emergency Operations Center Activity Log

Any unusual or emergency condition should be documented, including the following:

- activation or deactivation of emergency facilities

- emergency notifications to other local governments and to state and federal agencies
- significant changes in the emergency
- major commitments of resources or requests for additional resources from external sources
- telephone calls should be recorded in chronological order
- issuance of protective action recommendations to the public
- evacuations
- casualties
- termination of the incident

Costs of the Emergency Operations Center

For major emergencies, the emergency operations center shall maintain detailed records of costs expended. These records may be used to recover costs from the responsible party or insurers, or as a basis for requesting financial assistance for certain allowable response and recovery costs from the state or federal government. Documented costs should include:

- personnel costs, especially overtime
- equipment operation
- equipment leasing and rental
- contract services to support emergency operations
- specialized supplies expended in emergency operations

7. Inundation Area

The impacts of a dam breach have been evaluated and the results are included in *(Name)* Dam Breach Analysis (Tab 10). The inundation mapping resulting from the breach analysis is included in a tab at the back of this report. It illustrates the areas subject to flooding under severe storm conditions, a failure of the dam, or both. Also included on these maps are the times to flood associated with bridge crossings.

After examining the results of the breach analysis of *(Name)* Dam, it has been determined that there were a significant number of structures that could be affected either due to a PMF event alone with no dam breach, or due to a PMF or sunny-day dam breach. These structures are located along the *(Stream)*, the *(Stream)*, and the *(Stream)*. *(City or Town)* can suffer a dramatic impact from a breach of the dam. In addition, water resulting from a breach, and associated damages, will travel up the *(Stream)*.

(Name) Dam-Breach Analysis (Tab 10) contains profiles of the peak flood levels expected, as well as an estimation of the time from the beginning of the breach to the peak flood elevations. A comparison of the areas that are likely to be flooded with the plots showing the times from the start of the breach to the flooding shows the areas of evacuation and the time constraints involved. Figures in Appendix B of *(Name)* Dam Breach Analysis (Tab 10) include information on the estimated impact of flooding on the bridges along the *(Stream)*, the *(Stream)*, and the *(Stream)*. These structures may suffer such impacts before the peak elevation of the flood wave.

7.1. Local Evacuation Plan

If imminent failure of the dam with uncontrolled downstream flooding is anticipated, local emergency-management and law-enforcement personnel should notify those downstream of evacuation in the most expedient manner possible. The organizations and personnel on the Notification Flowchart should be contacted immediately. Local law-enforcement officials, along with radio and television stations, can best spread the notice for evacuation. The immediate impact will be to rural areas along *(Name of stream)* downstream of the dam. For sunny-day and PMF breaches, the following actions should be taken:

- Barricading all bridges that could possibly be flooded to prevent access to the affected area. These bridges include the *(Stream)* crossings of *(Highway or Road)*. See the maps at the end of this report (Tab 11) to determine appropriate barricade locations.
- The Department of Public Safety Regional Liaison office can assist with the notification of all persons and agencies involved, with the possibility of additional support—including contacting others not accessible by radio or telephone.
- County officials are generally familiar with developed areas in their jurisdiction. Such knowledge, coupled with the requirements of state law that they respond to disasters, make them the logical officials to be notified and to spread the warning message to all areas subject to flooding.

8. Implementation

8.1. Development

The draft Emergency Action Plan was sent to the TCEQ for review, and agency comments were incorporated into this document, copies of which are currently on file with TCEQ.

8.2. Testing

The Emergency Action Plan will be reviewed annually for contacts and numbers and will be tested every five years using a tabletop exercise conducted under the direction of the *(title of dam emergency planner)*. The purpose of this exercise is to review the plan with key personnel. Any revisions to the plan will be implemented after the exercise. The timing and frequency of testing can be adjusted as needed by the *(title of dam emergency planner)*. The table top exercise should include emergency scenarios; notification of participants, including verification of all phone numbers and personnel; and notification of local officials. Area residents should not be included.

8.3. Training

The *(title of dam emergency planner)* is responsible for training personnel as necessary for dam safety and emergency response and planning.

8.4. Updating

This plan should be reviewed every five years and revised as necessary. A distribution list for this plan is included in Tab 9. The Notification Flowchart should be updated once a year. Approval of the plan is provided at the front of the report. A new approval should be attached to each annual update of the plan, as well as a log of any sheet changes.

TAB 1

PERTINENT DATA

Embankment

Type	Earth fill
Length	___ feet
Maximum Height	___ feet
Top Width	___ feet
Top of Embankment Elevation	___ feet msl
Drainage Area	___ square miles

Service Spillway

Type	Uncontrolled ogee weir
Location	Right abutment
Crest Length	___ feet
Crest Elevation	___ feet msl

Emergency Spillway

Type	Excavated, broad-crested weir
Location	Left abutment
Crest Length	____ feet
Crest Elevation	___ feet msl

Inlet-Outlet Works

Type	_____
	_____
Location	Right end of the dam
Invert Elevation	_____ feet msl, respectively

Reservoir

Elev. Top of Conservation Pool	____ feet msl
Capacity Conservation Pool	_____ acre-feet

TAB 2

EVIDENCE OF DISTRESS

General Observation	Specific Observation	Condition	Notification	Emergency Action	Equipment, Material and Supplies	Data to Record
Boils	Small boils, no increase of water flow, flowing clear water	Abnormal	Notify *(Owner identifies titles of employees to be contacted)* during normal work hours. Call *(Owner's engineer)* for inspection.	Closely check all of downstream toe, especially in the vicinity of boil for additional boils, wet spots, sinkholes, or seepage. Closely monitor entire area for changes or flow-rate increases	None	Site and location, approximate flow
	Large or additional boils near previously identified ones, without increasing flow rate, but carrying small amount of soil particles	Watch	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, state dam-safety officials, and *(Owner's engineer)* immediately.	Initiate 24-hour surveillance. Monitor as described above. Construct sandbag ring dikes around boils, to cover them with water to retard the movement of soil particles. Filter cloth may be used to retard soil movement, but do **not** retard the flow of water.	Sandbags, filter cloth	Site and location, approximate flow
	Large or additional boils near previously identified ones, increasing flow rate, carrying soil particles	Possible Failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency-management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Continue 24-hour surveillance. Continue monitoring and remedial action as described above. Initiate emergency lowering of the reservoir. Issue a warning to downstream residents.	Sandbags, pump	Site and location, approximate flow
	Rapidly increasing size of boils and flow increasing and muddy water	Imminent Failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency-management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Downstream evacuation. Employ all available equipment to attempt to construct a large ring dike around the boil area.	Dozer, shovels, source of earthfill	Site and location, approximate flow

TAB 2 (continued)

EVIDENCE OF DISTRESS

General Observation	Specific Observation	Condition	Notification	Emergency Action	Equipment, Material and Supplies	Date to Record
Seepage	Minor seepage of clear water at toe, on slope of embankment, or at the abutments	Abnormal	Notify *(Owner identifies titles of employees to be contacted)*, Plant Coordinator and Plant Engineer during normal work hours. Call *(Owner's engineer)* for inspection.	Closely check entire embankment for other seepage areas. Use wooden stakes or flagging to delineate seepage area. Try to channel and measure flow. Look for upstream whirlpools.	Wooden stakes, flagging	Site, location, approximate flow
	Additional seepage areas observed flowing clear water and/or increasing flow rate.	Watch	Notify *(Owner identifies titles of employees to be contacted)*, Department of Public Safety Regional Liaison office, state dam-safety officials, and *(Owner's engineer)* immediately.	Initiate 24-hour surveillance. Monitor as described above. Construct measuring weir and channel all seepage through weir. Attempt to determine source of seepage.	Dozer, shovels	Site, location, approximate flow
	Seriously or rapidly increasing seepage, underseepage, or drain flow.	Possible Failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Continue 24-hour monitoring and remedial action as described above. Initiate emergency lowering of the reservoir. Construct a large ring dike around the seepage area.	Dozer, shovels, source of earthfill	Site location, approximate flow
	Additional seepage areas with rapid increase in flow and muddy water.	Imminent Failure	Notify *(Owner identifies titles of employees to be contacted),* National Weather Service, Department of Public Safety Regional Liaison office, county/city emergency management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Downstream evacuation. Employ all available equipment to attempt to construct a large ring dike around the seepage area.	Dozer, shovels, source of earthfill	Site location, approximate flow

TAB 2 (continued)

EVIDENCE OF DISTRESS

General Observation	Specific Observation	Condition	Notification	Emergency Action	Equipment, Material and Supplies	Data to Record
Slides or severe erosion	Skin slide or slough on slope of embankment. No further movement of slide and embankment crest not degraded.	Abnormal	Notify *(Owner identifies titles of employees to be contacted)* during normal work hours. Call *(Owner's engineer)* for inspection.	Examine rest of embankment for other slides. Place stakes in slide material and adjacent to it for determining if further movement is taking place.	Stakes, tape measure	Distance between stakes
	Slide or erosion involving large mass of material, crest of embankment is degraded, no movement or very slow continuing movement.	Watch	Notify *(Owner identifies titles of employees to be contacted)*, Department of Public Safety Regional Liaison office, state dam-safety officials, and *(Owner's engineer)* immediately.	Initiate 24-hour surveillance. Mobilize all available resources and equipment for repair operations to increase freeboard and to protect the exposed embankment material. Start filling sandbags and stockpile near slide area.	Dozer, shovels, sources of earthfill, sandbags.	Distance between stakes
	Slide or erosion involving large mass of material, crest of embankment is degraded, progressively increasing in size.	Possible Failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency-management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Continue monitoring and remedial actions as described above. Place additional material at the toe of the slope to stop the slide.	Dozer, shovels, source of earthfill, pump.	Distance between stakes
	Slide or erosion involving large mass of material, crest of embankment is severely degraded, movement of slide is continuing and may reach pool level.	Imminent Failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency-management coordinators, state dam safety officials, and *(Owner's engineer)* immediately.	Downstream evacuation. Utilize all available equipment and personnel to sandbag the degraded slide area to prevent it from overtopping.	Dozer, shovels, sandbags, pump.	Distance between stakes

TAB 2 (continued)

EVIDENCE OF DISTRESS

General Observation	Specific Observation	Condition	Notification	Emergency Action	Equipment, Material and Supplies	Data to Record
Sinkholes	Sinkholes anywhere on the embankment or within 500 feet downstream from the toe.	Abnormal	Notify *(Owner identifies titles of employees to be contacted)* during normal work hours. Call *(Owner's engineer)* for inspection.	Carefully walk the entire embankment and downstream area looking for additional sinkholes, movement, or seepage.	Stakes, flagging	Size, location
	Sinkholes with corresponding seepage anywhere on the embankment or downstream from the toe.	Watch	Notify *(Owner identifies titles of employees to be contacted)*, Department of Public Safety Regional Liaison office, state dam-safety officials, and *(Owner's engineer)* immediately.	Initiate 24-hour surveillance. Monitor as above. Construct sandbag dike around the seepage exit point to reduce the flow rate. Start filling sandbags and stockpile near sinkhole.	Dozer, shovels, pump	Size, location
	Large sinkholes with corresponding seepage anywhere on the embankment or downstream from the toe.	Possible failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency-management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Continue monitoring and remedial action as described above. Utilize sandbags to increase the freeboard on the dam if necessary.	Sandbags, dozer, pump	Size, location
	Sinkholes rapidly getting worse, seepage flowing muddy water and increasing flow.	Imminent failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency-management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Downstream evacuation. Utilize all available equipment and personnel to attempt to construct a large ring dike around the area.	Dozer, shovels, pump	Size, location

TAB 2 (continued)

EVIDENCE OF DISTRESS

General Observation	Specific Observation	Condition	Notification	Emergency Action	Equipment, Material and Supplies	Data to Record
Settlement	Obvious settlement of the crest of the embankment, especially adjacent to concrete structures.	Abnormal	Notify *(Owner identifies titles of employees to be contacted)* during normal work hours. Call *(Owner's engineer)* for inspection.	Look for bulges on slope or changes in crest alignment.	None	Size, location
	Settlement of crest of embankment that is progressing, especially adjacent to concrete structures or if any corresponding seepage is present.	Watch	Notify *(Owner identifies titles of employees to be contacted)*, Department of Public Safety Regional Liaison office, state dam-safety officials, and *(Owner's engineer)* immediately.	Initiate 24-hour surveillance. Mobilize all available resources for repair operations to increase freeboard. Fill and stockpile sandbags. Identify any boils near settlement points for flowing material and pursue action for boils.	Sandbags, dozer, shovels, source of earthfill.	Size, location
	Settlement of crest of embankment that is rapidly progressing especially adjacent to concrete structures or if any corresponding seepage is flowing muddy water or increasing flow.	Possible failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency-management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Continue monitoring and remedial actions as described above. Use sandbags to increase the freeboard on the dam if necessary.	Sandbags, shovels, dozer, source of earthfill.	Size, location
	Progressing settlement that is expected to degrade the embankment to reservoir level.	Imminent failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Downstream evacuation. Utilize all available equipment and personnel to build up the crest in the area that is settling. Identify any boils near settlement points for flowing material and pursue action for boils.	Dozer, shovels, source of earthfill, sandbags.	Size, location

TAB 2 (continued)

EVIDENCE OF DISTRESS

General Observation	Specific Observation	Condition	Notification	Emergency Action	Equipment, Material and Supplies	Data to Record
Cracking	Cracks in the embankment crest or on slopes.	Abnormal	Notify *(Owner identifies titles of employees to be contacted)* during normal work hours. Call *(Owner's engineer)* for inspection.	Walk on entire crest and slope and check for additional cracking.	Stakes, tape measure	Size, location
	Numerous cracks in crest that are enlarging, especially those perpendicular to the centerline of the dam.	Watch	Notify *(Owner identifies titles of employees to be contacted)*, Department of Public Safety Regional Liaison office, state dam-safety officials, and *(Owner's engineer)* immediately.	Initiate 24-hour surveillance. Carefully monitor and measure cracking to determine the speed and extent of the problem. Mobilize to fill cracks. Cracks parallel to the centerline indicate a slide. Follow remedial action for slides.	Stakes, tape measure, dozer, shovels, source of earthfill.	Size, location
	Large cracks in the crest that are rapidly enlarging, especially those perpendicular to the centerline of the dam.	Possible failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency-management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Continue monitoring and remedial action as described above.	Dozer, shovels, source of earthfill.	Size, location
	Cracking that extends to pool elevation.	Imminent failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency-management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Downstream evacuation. Continue remedial actions as described above.	Dozer, shovels, source of earthfill.	Size, location

TAB 2 (continued)

EVIDENCE OF DISTRESS

General Observation	Specific Observation	Condition	Notification	Emergency Action	Equipment, Material and Supplies	Data to Record
Cracking or movement of concrete structure	Minor cracking and/or movement.	Abnormal	Notify *(Owner identifies titles of employees to be contacted)* during normal work hours. Call *(Owner's engineer)* for inspection.	Immediately install measuring device to monitor movement.	Crack Monitors, stakes, tape measure.	Size, location
	Significant cracking and/or movement.	Watch	Notify *(Owner identifies titles of employees to be contacted)*, Department of Public Safety Regional Liaison office, state dam-safety officials, and *(Owner's engineer)* immediately.	Initiate 24-hour surveillance. Lower burlap on upstream face of crack to reduce flow of soil particles. Dump rockfill downstream of moving concrete structure monolith to resist the movement.	Burlap, rockfill, dozer, shovels.	Size, location, flow rate
	Serious cracking and/or movement	Possible failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency-management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Continue monitoring and remedial action as described above.	Dozer, rockfill, burlap, crack monitors	Size, movement, flow rate
	Major cracking and/or movement	Imminent failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency-management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Downstream evacuation. Continue monitoring and remedial actions as described above.	Dozer, shovels, rockfill	Size, location, flow rate

TAB 2 (continued)

EVIDENCE OF DISTRESS

General Observation	Specific Observation	Condition	Notification	Emergency Action	Equipment, Material and Supplies	Data to Record
Upstream Whirlpool	Whirlpool in the lake in the vicinity of the embankment	Imminent Failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency-management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Downstream evacuation. Attempt to plug the entrance of the whirlpool with riprap from the slope of the embankment. Search downstream for an exit point and construct a ring dike to retard the flow of soil particles	Dozer, source of earthfill, sandbags, filter cloth, straw, rocks	Size, location, flow rate
Broken gate	Structural member of a gate or gate operator broken or severely damaged so as to prevent operation of the gate	Possible failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency-management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Initiate 24-hour surveillance. Immediately place stop logs in front of gate and initiate necessary actions to get gate repaired.	Crane and welder	Type of problem, location
Rapidly rising lake	Lake level rising and rain continuing	Watch	Notify *(Owner identifies titles of employees to be contacted)*, Department of Public Safety Regional Liaison office, state dam-safety officials, and *(Owner's engineer)* immediately.	Initiate 24-hour surveillance of lake level and rainfall.		Lake level, rainfall
Dam being overtopped	Water flowing over the dam and lake continuing to rise	Possible failure	Notify *(Owner identifies titles of employees to be contacted)*, National Weather Service, Department of Public Safety Regional Liaison office, county-city emergency-management coordinators, state dam-safety officials, and *(Owner's engineer)* immediately.	Downstream evacuation. Continue monitoring.		Lake level, rainfall

TAB 3

SAMPLE NOTIFICATION MESSAGES

Note: These notification messages will be coordinated through the *(Owner)*, *(title of dam emergency planner)*, the National Weather Service, the Department of Public Safety Regional Liaison office, and the Emergency Management Coordinators for *AAA*, *BBB*, and *CCC* counties before they are disseminated to downstream organizations. Messages developed with the assistance of the National Weather Service may be used instead.

"Watch" Condition Message

This is an emergency message. *(Owner)* has declared a "watch" condition for *(Name)* Dam, Texas ID TX0####. *(Briefly describe the problem or condition.)* There is no immediate danger of the dam failing; however, the potential does exist. We request that you initiate appropriate emergency-management procedures. For verification, call the phone numbers listed on the Notification Flowchart of the Emergency Action Plan for *(Name)* Dam. The Department of Public Safety District *(###)* Regional Liaison Office has been notified of this condition and may be contacted for information on emergency procedures. *(Owner)* will supply additional information regarding the status of the dam as it becomes available.

"Possible Dam Failure" Warning

This is an emergency message. *(Owner)* has declared a "possible failure" condition for *(Name)* Dam, Texas ID TX0####. *(Briefly describe the problem or condition.)* There is a possibility that the dam could fail. Attempts to save the dam are under way, but their success cannot be determined as yet. Emergency water releases to lower the lake *(are/are not)* being made. We request that you initiate appropriate emergency management procedures and prepare for evacuation of the threatened areas. If *(Name)* Dam does fail, flooding will occur along the *(Stream)*, the *(Stream)*, and the *(Stream)*. For verification, call the phone numbers listed on the Notification Flowchart of the Emergency Action Plan for *(Name)* Dam. The Department of Public Safety *(Location)* District Regional Liaison office and the Emergency Management Coordinators for *AAA*, *BBB*, and *CCC* counties have been notified of this condition and may be contacted for information on emergency procedures. *(Owner)* will supply additional information regarding the status of the dam as it becomes available.

"Imminent Dam Failure" Warning

Urgent! This is an emergency message. *(Owner)* has declared that *(Name)* Dam, Texas ID TX0####, is in imminent danger of failing. Attempts to save the dam will continue, but their success is unlikely. We request that you initiate appropriate emergency management procedures and begin evacuation of threatened areas. It is probable that the dam will fail in hours. If *(Name)* Dam fails, a flood wave will move down the *(Stream)*, up the *(Stream)*, and upstream and downstream on the *(Stream)*. For verification, call the phone numbers listed on the Notification Flowchart of the Emergency Action Plan for *(Name)* Dam. The Department of Public Safety *(Location)* District Regional Liaison Office and Emergency Management Coordinators for *AAA*, *BBB*, and *CCC* counties have been notified of this condition and may be contacted for information on emergency procedures.

Dam Failure Message

Emergency! This is an emergency message. *(Owner)* has declared that *(Name)* Dam, Texas ID TX0####, has failed. A flood wave is moving down the *(Stream)*, up the *(Stream)*, and upstream and downstream on the *(Stream)* toward *(City)* and *(City)*. The flood waters have already reached *(Road)*, *(Road)*, and *(Road)* on *(Stream)*. The City of *(Name)* will begin flooding at (*time—give number of hours after PMF breach)*. FM *(###)* on the *(Name)* River will begin flooding at *(time—prior to a PMF breach, give*

number of minutes after a sunny-day breach). The flood wave will go up the *(Stream)* and flood areas along the river. *(Road)* in *AAA* County will begin flooding at *(time—prior to a PMF breach and three hours after a sunny-day breach)*. SH *(##)* at *(landmark)* will begin flooding at (*time—give number of hours after a PMF breach)*. Evacuate threatened areas immediately. For verification, call the phone numbers listed on the Notification Flowchart of the Emergency Action Plan for *(Name)* Dam. The Department of Public Safety *(Location)* District Regional Liaison office and the Emergency Management Coordinators for *AAA*, *BBB*, and *CCC* counties have been notified of this condition.

TAB 4

SAMPLE NEWS RELEASES

Note: Coordinate with the National Weather Service, the Department of Public Safety *(Location)* District Regional Liaison office, and the emergency management directors for *AAA*, *BBB*, and *CCC* counties prior to release. Messages developed with the assistance of the National Weather Service may be used instead.

Announcement for a Slowly Developing "Watch" Condition

(Owner) has declared a "Watch" condition for *(Name)* Dam as of *(time and date). (Briefly describe the problem or condition.)* There is no immediate danger of the dam failing; however the potential does exist. *(Describe what actions are being taken to monitor and control the situation.) (State the quantity of any releases.)*

Announcement for a Possible Dam Failure

(Owner) has declared a possible dam failure at *(Name)* Dam as of *(time and date). (Briefly describe the problem or condition.)* It is possible the dam could fail. Attempts to save the dam are under way, but their success cannot be determined as yet. *(Describe what actions are being taken to monitor and control the situation.) (State the quantity of any releases.)* Additional news will be made available as soon as it is received.

Announcement for an Imminent Dam Failure

Urgent! *(Owner)* has announced that *(Name)* Dam is in imminent danger of failing. *(Describe what actions are being taken to monitor and control the situation.)* It is possible that the dam will fail in *(##)* hours. Residents in low lying areas along the *(Stream)*, the *(Stream)*, and the *(Stream)*, as well as the town of *(Name)*, should prepare for immediate evacuation. Additional news will be made available as soon as it is received.

Announcement of a Dam Failure

Emergency! *(Name)* Dam failed at *(time and date)*. Residents who have not yet done so should immediately evacuate the city of *(Name)* and low-lying areas along the *(Stream)*, the *(Stream)*, and the *(Stream)*. The flood waters have already reached *(Highway)* and *(Road)*. Additional news will be made available as soon as it is received.

TAB 5

EQUIPMENT AND SUPPLIES

The following equipment and supplies may be necessary for use during emergencies.

EQUIPMENT	LOCATION
backhoes dump trucks portable welding equipment generators dozers excavators loaders motor graders	*(Names and addresses of contractors)*
crane	*(Name and address of contractor)*
sandbags	*(Names and addresses of businesses)*
rock riprap	*(Names and addresses of sources of rock)*

TAB 6

EMERGENCY CONTRACTOR SUPPORT

CONTRACTOR	EQUIPMENT	CONTACT	ADDRESS	PHONE
(Names)	dozers trackhoe dump trucks grader steel mechanical repairs electrical repairs small crane large crane backhoe emergency lighting generators			

TAB 7

TRAINING RECORD

Use this form to record training sessions. File the completed form in Tab 7 of the EAP. Thorough review of all items in the EAP should be thoroughly reviewed during training. Appropriate *(Owner)* employees and EAP team members should attend a training session annually (or participate in a simulated exercise).

TRAINING LOCATION: _____

DATE: _____ TIME: _____ INSTRUCTOR: _____

CLASS SIGN-IN

TAB 7 (continued)

SIMULATED-EMERGENCY EXERCISE

Date of Exercise:	
Participant Sign-In:	
Type of Simulation Conducted:	**Circle Emergency Type:** emergency water release watch condition imminent dam failure actual dam failure
Comments, Results of Exercise:	
Revisions Needed to EAP Based on Results of Exercise?	**☐ Yes ☐ No** **If yes, list revisions required:**

TAB 7 (continued)

PLAN REVIEW AND UPDATE

This plan will be reviewed and updated annually and tabletop exercises will be conducted at least once every five years. Document these reviews below.

Date of review: _____ Participants:

Date of review: _____ Participants:

Date of review: _____ Participants:

Date of review: _____ Participants:

Date of tabletop exercise: _____ Participants:

TAB 8

ANNUAL EAP EVALUATION CHECKLIST

Was the annual dam inspection conducted?	□ Yes □ No	If yes, is the checklist signed and included in the EAP?	□ Yes □ No
Was brush clearing, animal-burrow removal, or other maintenance required?	□ Yes □ No	If yes, describe actions taken and date:	
Was the outlet gate operable?	□ Yes □ No	If no, describe actions taken and date:	
Does the Notification Flowchart require revision?	□ Yes □ No	If yes, date revised Contact Information pages were distributed: (Note that revision of the Contact Information will not require EAP approval; however, the revised Contact Information pages will need to be redistributed as a replacement pages.)	
Was annual training or an exercise conducted?	□ Yes □ No	Circle: training exercise Date conducted:	
Are inspection and training records included in the EAP?	□ Yes □ No		
Was the EAP reviewed?	□ Yes □ No	If yes, review date:	
Were changes required to the EAP?	□ Yes □ No	If yes, date of revised EAP approval:	

Signature of dam supervisor: _____ Date completed: _____

TAB 9

DISTRIBUTION LIST

Authority	Name, Title, Phone	Address
Owner*(s)*		
National Weather Service	*(Name of Contact)*	
Department of Public Safety	Regional Liaison Officer Phone ###-###-####	
***AAA* County**	Emergency-Management Director	
***BBB* County**	Civil Emergency-Management Director	
***CCC* County**	Emergency-Management Director	
Texas Department of Transportation District *(###)*	*(Name of Contact)* Phone ###-###-####	
Texas Department of Transportation District *(###)*	*(Name of Contact)* Phone ###-###-####	
State of Texas Texas Commission on Environmental Quality Dam Safety Program	Warren Samuelson, P.E. Dam Safety Program Coordinator 512-239-5195	Field Operations Support Division, MC 174 P.O. Box 13087 Austin, TX 78711
Engineers	*(Names)*	

TAB 10

BREACH ANALYSIS

TAB 11

INUNDATION MAPS

TAB 12

GATE-OPERATION PLAN