

**INTERNATIONAL BOUNDARY
AND
WATER COMMISSION,
UNITED STATES SECTION**



2009 CRISIS MANAGEMENT PLAN

PRODUCED BY: SPECIAL OPERATIONS DIVISION

**OFFICE OF SECURITY AND EMERGENCY
MANAGEMENT**

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Section One “Overview”

Since Hurricane Katrina, an extra emphasis has been placed on establishing and maintaining viable Emergency Management programs in government. In 2008, the need for a functional Emergency Management program became evident for the USIBWC following Hurricane Dolly and the Presidio Flood event. The USIBWC owns and operates dams, wastewater treatment facilities, and a significant levee system which protects millions of binational residents from flooding. In addition, the agency produces electricity at two of its facilities which creates a unique interdependent system of flood control and power production.

In the event of a dam failure, uncontrolled release of the water stored behind USIBWC facilities could be capable of causing high loss of life and great property damage. In addition, the failure of certain facilities could cause severe long-term consequences to the border economy.

Because of the potential consequences associated with dam and wastewater treatment facility failure, it is vital that the USIBWC actively continue to construct and maintain an Emergency Management program that meets and exceeds the recommended standards prescribed by DHS and FEMA. The Special Operations Division (SOD) will continue to spearhead this effort and meet the challenges posed by disasters both manmade and natural that threaten the vitality of agency operations.

Section Two “Risk Management”

Risk management identifies the appropriate protective strategies and measures as part of a cost-effective plan to protect USIBWC facilities and prevent or minimize the potential for a successful attack.

The USIBWC risk management plan goes beyond security and protective measures and incorporates crisis management into its overall approach to securing agency infrastructure. This comprehensive approach to risk also considers what happens in the event of damage to the facility, if dam failure is imminent, if the facility has failed, and by minimizing the safety and economic impacts caused by the damage or failure.

Section Three “Crisis Management Programs”

In a general sense, crisis management consists of planning for and responding to any emergency incidents that might occur. The USIBWC Special Operations Division has decided to meet its emergency management goals by focusing on four major components:

- Emergency Action Plans;
- Recovery Plans;
- Continuity Plans; and
- Exercises

Emergency Action Plans

Dam safety programs have long relied on Emergency Action Plans (EAPs) to guide response in critical situations. The objectives of EAPs are to mobilize a pre-planned response to prevent uncontrolled release of water from the dam, and to initiate community actions to maintain public safety in a case such as a release.

Recovery Plans

In addition to the immediate safety issues addressed in the EAP, damage or failure of a facility can have longer term economic impacts. These impacts will certainly impact the USIBWC but may also have wider impacts on the border community, industry, or the regional economy. Therefore, rapid restoration of USIBWC facility functions might be necessary to help minimize such impacts. Recovery plans can be used to prepare for quick repair of damage. Recovery plans might address both short-term repairs to partially restore project functions and long-term repairs to fully restore the project.

Continuity Plans

During an adverse situation, it might be necessary to continue facility operations with the absence of key personnel. These conditions were present following the untimely passing of former Commissioner Carlos Marin during the Presidio Flood event. Continuity planning can be used to identify personnel with necessary skill sets and to define shifts of roles and responsibilities to respond to the major absence of personnel.

Exercises

While planning is essential for effective crisis management, to be more fully prepared it is necessary to conduct periodic exercises testing implementation of those plans. Exercises will raise general awareness of potential crisis situations. They will ensure that key staff members are familiar with the plans and understand their roles and expected actions. In addition, exercises can help identify shortcomings in plans leading to improvements.

Section Four “Emergency Action Plans”

Emergency Action Plans (EAPs) are intended to guide dam owners and operators in the prevention, response, and mitigation of impending serious incidents and minimizing the ensuing life safety consequences and property damage. EAPs include notification lists to mobilize resources to prevent imminent failures during emergency situations and to communicate appropriate danger warnings to local authorities to the public. They might also address a variety of preparedness issues such as alternative communications systems or emergency supplies and equipment. EAPs must be site-specific because conditions are unique at each dam and downstream of that dam. The USIBWC has adopted the standards prescribed by FEMA 64 *Emergency Action Planning for Dam Owners* for developing and maintaining EAPs.

Each dam has been tasked with producing an EAP for its site in accordance with FEMA 64 standards. Concerning the USIBWC, all EAPs have been received by the Special Operations Division, reviewed for accuracy and content, and certified in accordance with FEMA standards (minus the inundation maps). In addition, each dam will be responsible for updating the content of its respective EAP on an annual basis. The EAPs will also be shared with local emergency management officials once the inundation maps are received from the GIS section.

Basic Elements of an EAP

The EAP consists of several components:

- A notification flowchart for emergency levels one two and three;
- An emergency detection, evaluation, and classification guide that enables dam managers to provide early detection and timely evaluation of any situation that requires an emergency action;
- A responsibilities section that determines the dissemination of EAP-related tasks in order to ensure effective and timely action in the event of an emergency;
- A preparedness segment which refers to actions to be taken before an emergency to prevent or alleviate the effects of a dam failure or large operational releases and to facilitate the response to emergencies;
- Inundation Maps to be used by the dam management and local emergency management officials to facilitate timely notification and evacuation of areas affected by a dam failure;
- Appendices which will be used to provide information that supports and supplements the material used in the development and implementation of the EAP.

Coordination

In addition to the proper development and maintenance of an EAP, it is important to establish and sustain relationships with local, county, state and federal emergency management officials. Once relationships are established, the annual update of the EAP should be coordinated with emergency management officials so that external opinions and expertise are incorporated into the creation of the document as well. When the inundation maps are developed, they will be distributed to local emergency management officials so that they can then create evacuation maps and properly plan for contingencies. It is also very important to coordinate with external emergency management entities so that everyone understands their responsibilities and roles in the event of an incident. In spring 2009, the agency Emergency Manager plans to travel to FEMA Region Six HQ, the Texas Department of Emergency Management and to key county Emergency Management offices in order to cultivate relationships with governmental partners and to educate these entities concerning the USIWBC mission, and what capabilities the agency can employ during an emergency.

Communications

Reliable communications are essential during emergency situations in order to quickly exchange critical information among key individuals and organizations. Locally, dam managers will employ various modes of communication to relay important information to headquarters and local emergency management officials, the media used will include landlines, cell phones, satellite phones and radios. At headquarters, the Crisis Action Team is responsible for conveying information to emergency management officials as well (mostly State and Federal levels); this will be accomplished using situational reports (SITREPs) every 24 hours or more frequently if necessitated.

Evacuation

Evacuation planning and implementation is the responsibility of state and local officials. The USIBWC will NOT usurp this responsibility; however, there may be situations where recreational facilities or residences just below the dam may require a timelier warning, in this case, local management will do what it can to prevent loss of life by providing a timely warning. Local management will also coordinate with local officials in order to provide as much notification as possible so that people can be evacuated with as much warning time as possible.

Declaring and Terminating the Emergency

Local management in coordination with higher management will be responsible for making decisions that an emergency condition exists or no longer exists at the dam or that the level of the emergency has changed. The EAP designates the Area Operations Manager as the individual responsible for orchestrating the declaration of an emergency. State and local officials are responsible for initiation and termination of evacuation or

disaster response activities. Most local emergency management officials will make decisions based on the recommendations of dam management so USIBWC professional input is vital to activating and deactivating emergency response efforts.

Post Emergency Evaluation

Following any emergency, all participants should participate in an after action review which identifies:

- Events occurring before, during and following an emergency;
- Significant actions taken by each participant and possible improvements for future emergencies; and
- Strengths and deficiencies found in procedures, materials, equipment, staffing levels and leadership.

Maintaining an EAP

Without periodic maintenance, the EAP will become out-dated and lose its effectiveness. Upon inception of the agency Emergency Management program, all dam EAPs were at least a decade old and had not been updated since their respective development. SOD has mandated that EAPs be reviewed and updated on an annual basis and be exercised in accordance with the newly developed emergency exercise cycle. Changes such as updated mapping must be incorporated immediately in order to facilitate proper emergency response from local officials. In addition, changes in personnel and phone numbers should be updated accordingly.

Sensitive Information

USIBWC EAPs are considered sensitive documents. It is necessary that the distribution be exclusive to those with a viable need to know. Entities with a need to know will include emergency management agencies and law enforcement. EAP distribution requests must first be reviewed and authorized by the Special Operations Division.

Section Five “Recovery Plans”

USIBWC dam and wastewater projects provide a wide range of benefits to a broad community. These include economic, environmental, and social benefits including irrigation, electric power generation, “black start” capability, water storage, recreation, and flood mitigation. Disruption of USIBWC dams for extended periods of time could have economically devastating regional or binational consequences.

Recent infrastructural failures throughout the United States have increased emphasis on the development of recovery plans. The USIBWC will focus its emergency management planning efforts on recovery planning in late 2009/ early 2010 following EAP development and Continuity of Operations Planning.

Recovery Plan Objectives

The objectives of developing and periodically updating recovery plans are to:

- Minimize the extent of damage progression;
- Restore project function, beginning just after initial response;
- Minimize economic losses through quick restoration and function; and
- Address all types of potential hazards (natural, accidental, manmade).

Recovery Plan Contents

The recovery plan (RP) should make extensive references to specific content of the project EAP or Emergency Response Plan (for wastewater treatment facilities). This will minimize redundancy of information, make the plan simpler, and eliminate contradictory information. The USIBWC will follow the guidelines established by the United States Army Corps of Engineers in reference to developing RPs.

The RP will address each critical component of the facility. The emergency management team will identify the likely hazards and predict the type and magnitude of damage from those hazards. Based on that probable damage, there will be an order of magnitude estimate of the direct and indirect consequences; a list of options to minimize consequences will follow.

Once the hazards are identified, it is essential that the facility do whatever is possible to stockpile and procure supplies that can mitigate the identified disaster scenarios. In the event of a disaster, this will enable the local management team to reduce the impact of the disaster and subsequent damage to the community.

Response Coordination

In the event that an incident occurs that causes great damage to the facility, multiple agencies at all governmental levels will likely become involved as they will provide initial and continued response. Because of the joint nature of emergency response, it is essential that local management and the Special Operations Division maintain constructive relationships with response entities. Inter-agency response will improve disaster mitigation efforts.

Financial Information

Major recovery activities are dependent on available funding. For common types of project components, the RP should include tables that list the types of damage that might be expected, followed by various replacement and repair options to restore partial or full function along with the probable time and cost for those options.

Sensitive Information

USIBWC RPs will be considered sensitive documents. It is necessary that the distribution be exclusive to those with a viable need to know. Entities with a need to know will include emergency management agencies and law enforcement. RP distribution requests must first be reviewed and authorized by the Special Operations Division.

Section Six “Continuity Plans”

Continuity planning helps facilitate the performance of an organization’s essential functions during any situation that may disrupt normal operations. The continuity plan will encompass various topics that are essential to continued agency operation. The USIBWC SOD has determined that the FEMA COOP template will be the adopted agency standard. The USIBWC HQ COOP was completed in January 2009. By the end of April 2009, all field offices will submit their COOPs to SOD for review and subsequent certification. The minimum components of the COOP will consist of the following:

- Identification of essential functions;
- Interoperable communications;
- Delegations of authority;
- Alternate facilities;
- Vital Records;
- Human Capital; and
- Computer Disruptions

Identification of Essential Functions

For the USIBWC field sites, management will want to consider the following when identifying essential functions:

- Controls and systems that open or close gates and valves;
- Personnel who manipulate those systems and controls;
- Personnel who decide when and how much to adjust release of water;
- Dam safety engineers authorized to make decisions on the safety of the dam;
- Collection of data that forms the basis of such decisions; and
- Communication between those operating the controls and those deciding on releases.

Interoperable Communications

Continuity of communications could become an issue during a crisis for a number of reasons. Phone systems (both cellular and land lines) can experience varying degrees of disruption during and following an incident, relocation can disrupt computer communications and radios can fail at times due to terrain. The USIBWC emergency management team in conjunction with the Information Management Division is actively working the continuity of agency communications. The Las Cruces Office was recently designated as the agency alternate location for computer network redundancy.

Delegations of Authority

Certain types of emergency situations might result in the temporary or permanent loss or incapacitation of key personnel. COOPs will clarify what decision-making authority will be transferred in various circumstances.

Alternate Facilities

COOPs will also address relocation of essential functions if the primary location has been disrupted. For example, in the event that the HQ building experiences an incident requiring temporary relocation, essential personnel will relocate to the American Dam office in order to continue operations. If the American Dam facility is uninhabitable, the Las Cruces Office will become the tertiary working location until the HQ or American Dam Office becomes habitable.

Vital Records

For field offices, vital records will consist at the minimum of data concerning stream-flow upstream and downstream of the dam, expected near-term inflows, release rates for various gate positions and reservoir levels. Other information such as important records, personnel information, etc. should be secured as well. Computer systems should be backed up as well.

Human Capital

The USIBWC is dependent on its staff for successful operation. COOPs will address how to maintain essential functions in case of serious disruption to staff. Proper planning in the COOP will identify the staff needed to support essential functions; this will include the number of people and skills required.

Section Seven “Exercises”

Emergencies at dams, wastewater treatment facilities and on levees are not uncommon events. Therefore, training and exercises are necessary to maintain operational readiness, timeliness, and responsiveness. The USIBWC SOD assessed the previous testing structure and modified the cycle to reflect newly defined requirements as defined by FEMA 64.

Workshops

Workshops are an excellent source of educating essential employees as to what their responsibilities are in the event of an emergency. Workshops enable personnel to discuss and describe technical matters, responsibilities, and procedures. In addition, workshops are used to determine specific objectives, develop potential scenarios, and to achieve specific goals. The USIBWC engages in an annual flood control workshop at the facilities located on the Rio Grande.

Table Top Exercises

The table top exercise involves meeting of essential personnel in a conference room environment. The format is usually informal with minimum stress involved. The exercise begins with the description of a simulated event and proceeds with discussions by the participants to evaluate the plan and response procedures and to resolve concerns regarding coordination and responsibilities. Table top participants are encouraged to discuss issues in depth and develop decisions through slow paced problem solving, rather than rapid, spontaneous decision making that occurs under simulated conditions.

The USIBWC will exercise its first table top scenario in March 2009 using a fictitious scenario, the “Hurricane Cecil Table Top Exercise.” This exercise will involve the HQ Crisis Action Team, Amistad Dam, Falcon Dam, and the Lower Rio Grande Flood Control Project. Also in 2009, SOD will exercise the Upper Rio Grande Flood Control Project and the wastewater treatment facilities in San Ysidro, CA and Nogales, AZ.

Functional Exercises

A functional exercise is the highest level exercise that does not involve the full activation of local emergency management personnel and facilities, or test evacuation of residents downstream of the dam. It involves various levels of the project and State and local emergency management personnel; it will also include CILA officials. The functional exercise takes place in a stress-induced environment with time constraints and involves the simulation of facility failure or other specified events that require effective responses by trained personnel. The participants “act out” their actual roles. The exercise is designed to evaluate both the internal capabilities and responses of facility management and the workability of the information in the plan used by emergency management

officials to carry out their responsibilities. The functional exercise is also designed to evaluate the coordination activities between the dam owner and emergency management personnel. The USIBWC SOD will develop scenarios in early 2010 and exercise all field offices and headquarters in the summer of 2010.

Full-Scale Exercises

A full-scale exercise is the most complex level of exercise as all resources are mobilized to enable participants to experience conditions as close to real world conditions as possible. The basic difference between functional and full-scale exercises is that a full-scale exercise involves actual field movement and mobilization, whereas field activity is only simulated in a functional exercise. The primary objectives of a functional or full-scale exercise are to:

- Reveal the strengths and weaknesses of the plan, including specified internal actions, external notification procedures, and adequacy of other information such as inundation maps.
- Reveal deficiencies in resources and information available to the dam owner and State and local agencies.
- Improve coordination efforts between the USIBWC and emergency management entities.
- Clarify the roles and responsibilities of the USIBWC and emergency management officials.
- Improve individual performance of essential personnel.
- Gain public recognition of emergency plans.
- Test the monitoring, sensing, and warning equipment at remote facilities.
- Test the functionality of equipment.

The USIBWC plans to engage in full-scale exercising in the summer of 2011.

Frequency

The USIBWC will have table top exercises in 2009, functional exercises in 2010 and full-scale exercises in 2011. Following the completion of the initial exercise cycle, the USIBWC will progress to having table top exercises on an annual basis, a functional exercise every three years and a full-scale exercise every five years. This cycle exceeds FEMA recommended standards regarding the frequency of exercises.

Section Eight “The Way Forward”

The USIBWC Emergency Management program has come a long way since its inception in January 2008. Prior to January 2008, the agency only engaged in annual flood workshops. The back to back disasters of Hurricane Dolly and the Presidio Flood in summer 2008 amplified the need for the agency to develop a viable emergency management program and plan. Since the summer of 2008, EAPs have been submitted, a Crisis Action Team and Emergency Operations Center Standard Operating Procedure was developed, COOP templates were developed and distributed to the field with a suspense date of April 2009, and two emergencies were successfully mitigated and managed.

The future of the program appears very bright. EAPs and emergency response plans will be updated on an annual basis, DPs will be submitted by early 2010, and exercises will occur to ensure that essential personnel are able to successfully manage and mitigate the impact of an emergency. In addition, communication with fellow government agencies will be improved as the education campaign is scheduled to occur in April 2009. The Special Operations Division will continue to support agency operations through hard work, dedication, and by providing a plan for successfully preparing USIBWC personnel for managing disasters.

Appendix A

In this section, you will insert the facility's respective Emergency Action Plan (applies to Amistad, Falcon, Anzalduas and Retamal); the facility's respective Emergency Management Plan (applies to NIWTP and SBIWTP); and/ or your respective Flood Control Manual (applies to LRGFCP, Presidio, URGFCP, Yuma, and SBIWTP).

Appendix B

In this section, you will insert your Disaster Recovery Plan (DRP). DRPs will be created in late 2009/ early 2010 as it is the final component of a holistic emergency response program.

Appendix C

In this section, you will insert your Continuity of Operations Plan (COOP). COOPs are due by the end of April 2009.

Appendix D

Guidelines for Seminars

Seminars can be used to address a wide range of topics. Although the topics may vary, all seminars share the following common attributes.

- They are conducted in a low-stress environment.
- Information is conveyed through different instructional techniques, which may include lectures, multimedia presentations, panel discussions, case study discussions, expert testimony, decision support tools, or any combination thereof.
- Informal discussions are led by a seminar leader.
- There are no real-time “clock” constraints.
- They are effective for both small and large groups.

Prior to participating in a seminar, participants should have a clear understanding of exercise objectives, which can range from developing new standard operating procedures to attaining priority capabilities. Seminars are typically conducted in a lecture-based format with limited feedback or interaction from participants.

Guidelines for Workshops

To be effective, workshops must focus on a specific issue, and the desired outcome, product, or goal must be clearly defined. They provide an ideal forum for:

- collecting or sharing information;
- obtaining new or different perspectives;
- testing new ideas, processes, or procedures;
- training groups to perform coordinated activities;
- problem-solving complex issues;
- obtaining consensus; and/or
- building teams.

Typically, workshops begin with a presentation or briefing, during which the background and rationale for the workshop are conveyed, and specific activities and expected outcomes are delineated. The presentation is typically followed by facilitated breakout sessions, in which workshop participants break into groups for focused discussions of specific issues. Breakout sessions are used to increase participant interaction regarding the issues most relevant to their functional areas.

Ideally, breakout sessions are facilitated by someone with both subject matter knowledge and facilitation experience. If this is not possible, it is more important to have a good facilitator who can keep the discussion on track than to have subject matter knowledge. Following breakout group discussions, the groups reconvene in a plenum session to present outcomes.

Guidelines for a Tabletop Exercise

A tabletop exercise is like a problem-solving or brainstorming session. A tabletop is usually not as tightly structured as a full-scale exercise, so problem statements can be handled in various ways. The facilitator can verbally present general problems, which are then discussed one at a time by the group or they can be verbally addressed to individuals first and then opened to the group.

Another approach is to deliver pre-scripted messages to players. The facilitator presents them, one at a time, to individual participants. The group then discusses the issues raised by the message, using the EOP or other operating plan for guidance. The group determines what, if any, additional information is needed and requests that information. They may take some action if appropriate.

A third option is for players receiving messages to handle them individually, making a decision for the organization they represent. Players then work together, seeking out information and coordinating decisions with each other.

Participants should be provided with reference materials that could include EAPs, maps, and other relevant materials. The tabletop facilitator must have good communication skills and be well informed on applicable plans and organizational responsibilities.

Guidelines for Games

Games are hypothetical situations steered by player actions. Games explore the consequences of player decisions and actions. Therefore, they are excellent tools to use when validating or reinforcing plans and procedures, or evaluating resource requirements.

Games have the following common characteristics.

- Play unfolds contingent on player decisions.
- They encourage a competitive environment.
- They provide rapid feedback.
- They improve teamwork.
- They foster an environment to practice group problem solving.
- Group message interpretation is tested.
- Interagency coordination is assessed.
- Senior officials become familiar with individual responsibilities.
- Players explore potential future scenarios.
- Consequences of player actions are demonstrated.

A major variable in games is whether consequences of player actions are scripted or random. After each player action or move, the controller presents the outcome. Depending on the game's design, this outcome can be either pre-scripted or decided after play. Identifying critical decision-making points is a major factor in the success of games because players make their evaluated moves at these crucial points.

Due to the usual limitation on number of players, planners are encouraged to open the exercise to observers, if possible. Observers are asked not to participate in discussions and strategy sessions, but can be tasked to make notes and report back to controllers with feedback.

Guidelines for Drills

A drill is a coordinated, supervised activity usually used to validate a specific operation or function in a single agency or organization. A drill is useful as a stand-alone tool, but a series of drills can also be used to prepare several agencies/organizations to collaborate in a full-scale exercise.

Drills typically include the following attributes.

- They have a narrow focus.
- Results from drills are measured against established standards.
- They provide instant feedback.
- They involve a realistic environment.
- They are performed in isolation.
- Players become prepared for exercises that are larger in scope.

Clearly defined plans, policies, and procedures need to be in place. Personnel need to be familiar with those plans and policies, and trained in the processes and procedures to be drilled.

The drill begins when controllers and evaluators are properly stationed. If no safety issues arise, the drill continues until the process is complete, time expires, or objectives are achieved.

During the simulated incident, players must know that they are participating in a drill and not an actual emergency. Controllers ensure that participant behavior remains within predefined boundaries and that entities not involved in the drill (e.g., site security, local law enforcement) are not unnecessarily mobilized.

Evaluators observe behaviors and compare them against established plans, policies, procedures, and standard practices (if applicable). Safety controllers ensure all activity takes place within a safe environment.

Guidelines for Functional Exercises

The functional exercise makes it possible to test the same functions and responses as would be tested in a full-scale exercise, without the high costs or safety risks. Functional exercises are lengthy and complex; they require careful scripting and careful planning. The functional exercise is well-suited to assess the:

- direction and control of emergency management;
- adequacy of plans, policies, procedures, and roles of individual or multiple functions;
- individual and system performance;
- decision-making process;
- communication and information sharing among organizations;
- allocation of resources and personnel; and
- overall adequacy of resources to meet the emergency situation.

The exercise is much more likely to be successful if the participants receive a briefing that covers an overview of objectives, how the exercise will be carried out, the time period to be simulated, and ground rules and procedures. The exercise formally begins with the presentation of the narrative.

The action begins as simulators communicate messages to players, and players respond as they would in a real emergency. The players then make requests of simulators, and simulators react convincingly. This ongoing exchange takes place according to the carefully sequenced scenario of events that governs what takes place, when each event occurs, and the messages used to inform the players. The players should be able to decide among the full range of responses normally available to them during an emergency. Their ability to make decisions, communicate, or otherwise carry out their responsibilities should not be constrained by the exercise situation.

Functional exercises can depict events and situations that would actually occur over an extended time period (one or two weeks or more). In order to include multiple phases of the emergency (preparation, response, recovery, mitigation) in a two-day exercise, it would be necessary to stop the exercise periodically and advance the time by a number of hours or days. These skip-time transitions should be kept to the minimum necessary to cover the scope of the exercise. They can usually be planned to coincide with a natural break point.

To the extent possible, the functional exercise should take place in the same facility and in the same operational configuration that would occur in a real emergency.

Guidelines for Full-Scale Exercises

Full-scale exercises are interactive exercises designed to challenge the system under review in a highly realistic and stressful environment. The realism of the full-scale can be conveyed through on-scene actions and decisions, simulated “victims,” communication devices, equipment deployment, and resource and personnel allocation.

Full-scale exercises require a significant investment of planning, time, effort, and resources—it may take 1 to 1½ years to develop a complete exercise package. Despite the intensive effort involved in the planning and implementation phases, full-scale exercises are valuable because they enable an organization to evaluate its ability to perform many functions at once. They are also effective at pinpointing resource and personnel capabilities, revealing planning and resource shortfalls, and testing inter- and intra-organizational coordination.

The full-scale exercise begins in a fashion similar to the functional exercise; whether it is announced or “no notice” depends in part on the objectives. The exercise designer will decide how and when the exercise is to begin. The trigger may simply be a call from dispatch, a radio broadcast, or a telephone call from a private citizen. The beginning for each participant should be as realistic as possible (that is, personnel should receive notification through normal channels).

All decisions and actions by players occur in real time and generate real responses and consequences from other players. The exercise messages may be scripted or visual—staged scenes, props, role-playing victims.

Because the activity during the exercise is at a very high level great care must be given to developing, implementing, and monitoring health and safety plans. The high level of activity also suggests that multiple observers must be on hand to record and assess decisions, outcomes, conflicts, resource use, and the effectiveness of the plans or protocols being tested.

Appendix E

Potential Crisis Management Incidents

The following are examples of the types of incidents which could serve as the basis for developing an emergency action plan, a response plan, and a continuity plan as well as an exercise to test the effectiveness of those plans.

Attack: A hostile (cyber or physical) action aimed at disrupting or destroying operational capability and/or causing significant damage to the facility.

Breach or Failure: Any condition characterized by total or partial loss of the capability to impound water.

Controlled Breach: Planned (non-emergency) breach of an impounding structure, possibly carried out to remove the facility from service or to make major repairs.

Cyber Security Incident: Any denial of service attacks incidents, identification of malicious codes, unauthorized access, and/or inappropriate usage of information systems.

Earthquake: Operations and structural performance are affected by a nearby seismic event.

Emergency Action Plan Activation: Implementation of the emergency action plan (or emergency actions) in part or whole.

Emergency Condition: Any event or circumstance that clearly compromises the structural integrity of the facility and could lead to breach or failure. For example: Water has overtopped a dam or dike.

Equipment Malfunction: Failure of mechanical or electrical equipment to perform the functions for which they were intended.

Excessive Release: Reservoir discharge that exceeds downstream capacity and/or causes downstream damage.

Facility Mis-Operation: Unintentional operator error affecting the operations of the facility.

Lock Closure: Unscheduled or scheduled interruption of partial or total navigation traffic through the facility.

Physical Security Incident: Any breach in access control systems such as fences, doors, gates, locks, and security zones.

Regulatory Action: The regulatory agency has determined an unsafe condition exists, or that the facility does not meet applicable design criteria (e.g., inadequate spillway capacity), and requires action to be taken by the owner (e.g., reservoir restriction, safety modification).

Reservoir Incident: Any event in the reservoir that may impact the structural/functional integrity of the facility. For example: Landslides.

Sabotage: A deliberate action aimed at weakening or destroying operational capability through subversion, obstruction, disruption, and/or destruction.

Security Posture Modification: Any change of security activities and protocols in response to specific threat reports.

Significant Inflow Flood: Operations and structural performance are affected by significant inflow flood.

Significant Inflow of Ice and Debris: Operations and structural performance are affected by significant inflow of ice and debris.

Structural Modification: Modifications to improve the safety and/or operational characteristics of the facility.

Suspicious Activity: Any indication that surveillance activity (such as elicitation of inappropriate information, suspicious photography, attempted intrusion, steady observation, etc.) could be taking place.

Unsafe Condition: Any developing or occurring event or circumstance that may adversely affect the structural integrity of the facility but that is considered controllable through the appropriate remedial actions. For example: Water level of the reservoir reaching unsafe levels; any developing downstream erosion or settlement; any unusual leakage; etc.

Unsatisfactory Condition Report: The findings of any inspection, assessment, or investigation that identify unsatisfactory or unsafe conditions at the facility.

Unusual Observation: An unusual situation is detected but there is no indication that the structural/functional integrity of the facility may be immediately compromised. For example: Observations of damage, deterioration or signs of distress; instrumentation readings reaching pre-determined limits; signs of piping, slumping, unusual cracks, or sinkholes; any obstruction in the spillway; etc.

Vandalism/Theft: Willful or malicious destruction or defacement of public or private property/ taking and removing of personal property with intent to deprive the rightful owner of it.

Vessel Allision/Collision/Grounding: Any events involving vessel impacts on other vessels, structures or operating equipment at the facility.

Appendix F

In this section, you will log each emergency management exercise or event that occurs.

Type of Exercise/ Incident

Date

AOM Signature
