

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

NOTICE OF REVISED EMERGENCY
ACTION PLAN GUIDELINES

(April 5, 1985)

Pursuant to the authority in Section 12.22(a)(1) of the Commission's Regulations, the Director, Office of Hydropower Licensing, has revised the guidelines for the preparation of emergency action plans (EAP). The guidelines have been revised to facilitate the preparation, annual review and updating of EAP's to ensure their effectiveness and workability. The guidelines should be used in conjunction with the instructions contained in Part 12, Subpart C of the Commission's Regulations.

Owners/developers (herein referred to as owners) of all dams under Commission jurisdiction must develop and file an EAP with the Regional Engineer unless an exemption is obtained pursuant to Section 12.21 of the Regulations. All required EAP's developed subsequent to the date of this notice must follow the format established in the revised guidelines. Owners are not required to rewrite and refile existing EAP's in accordance with the established format. However, as part of the annual review and updating process, owners should determine whether their EAP's can be enhanced based on the information in the revised guidelines and are, therefore, urged to consider reorganizing their EAP's in the format described therein.

Copies of the revised guidelines are available from the Director, Division of Inspections or the Regional Engineer.

Kenneth F. Plumb
Secretary

DC-A-39

GUIDELINES FOR PREPARATION OF EMERGENCY ACTION PLANS

1. **Purpose.** These guidelines are for the purpose of defining the requirements of an acceptable emergency action plan (EAP) and for facilitating its preparation and annual testing and update. An emergency is defined as an impending or actual sudden release of water caused by an accident to, or failure of, project structures.
 2. **Background.** The "Guidelines for Preparation of Emergency Action Plans" were established in November 1979. The guidelines were subsequently included as the Appendix to Order No. 122 of the Commission's Regulations, issued January 21, 1981. Section 12.22(a)(1) of that Order states that "an emergency action plan must conform with the guidelines established, and from time to time revised, ..." The demand for more specific, comprehensive guidelines resulted in this revision to the guidelines.
 3. **Scope.** The guidelines establish a specific format (see item 4) to assist in preparing an effective, workable EAP. The format was developed to include all the pertinent information required for the EAP itself and its accompanying appendix. In providing the appropriate information, the EAP should be site specific, reflecting mode of operation, internal and external means of communication, and interaction with appropriate agencies and owners of other sites. The format should be used in conjunction with the instructions contained in Part 12, Subpart C of the Commission's Regulations.
- It is not imperative that current EAP's be revised to comply with this format. However, each EAP should contain a discussion of the method for implementing the notification plan in a timely manner. It is recommended that the owners use these guidelines to facilitate the annual review and updating of the workability of an EAP. The Regional Engineer is to be advised of the results of this annual review prior to December 31 of each year.

Under the provisions of Section 12.22(c) of the Commission's Regulations, each owner of a hydroelectric project under the jurisdiction of the Commission with operating or other personnel located within a 10-mile radius of a nuclear power plant reactor must prepare a radiological emergency response plan to be implemented in the event of a severe accident or incident resulting in the release of radioactive materials from a nuclear plant. The guidelines for preparation of a radiological emergency response plan (see item 5) should be used in conjunction with the instructions contained in Section 12.22(c) of the Commission's Regulations.

4. The Format. The following pages (page 3 thru 22) comprise the format by which all newly required EAP's are to be developed. This format should facilitate the preparation, updating, and annual review of an EAP. It should be used in conjunction with the instructions contained in Part 12, Subpart C of the Commission's Regulations. The format was developed to include all of the pertinent information to be included in the EAP as required by the Commission's Regulations. It is recommended that the EAP be bound using a method, such as a three-ring binder, whereby outdated pages can be easily removed and replaced by updated information to ensure a complete, current, and workable plan.

[Title Page]

EMERGENCY ACTION PLAN

[Name] of Development

Project No. [FERC No.]

Name of the licensee/exemptee/applicant:

Address:

Submitted [date]

Verification:

State of [],
County of [], ss:

The undersigned, being first duly sworn, states that [he, she] has read the following document and knows the contents of it, and that all of the statements contained in that document are true and correct, to the best of [his, her] knowledge and belief.

(Name of person signing)

(Title)

Sworn to and subscribed before me this [day] of [Month], [year].

(Signature of Notary Public or other state or local official authorized by law to notarize documents).

SEAL

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EMERGENCY ACTION PLAN

I. Notification Flowchart

- Provide a flowchart summarizing clearly who is to be notified and who is responsible for notifying which owner representative(s) and/or public official(s), and in what priority for the following emergency situations:

- A. Failure is imminent or has occurred.
- B. Potentially hazardous situation is developing. Situation where a failure may develop, but pre-planned actions taken during certain events (such as major floods, earthquakes, evidence of piping, etc.) may prevent or mitigate failure. Even if failure is inevitable, more time is generally available than in situation A above to issue warnings and/or take preventative actions.

- Include individual names and position titles, office and home telephone numbers, and alternate contacts and means of communication.

- The flowchart should be easy to follow under emergency conditions and should normally be limited to one page for each failure mode. Color coding may prove helpful. (Detailed information supplementing the flowchart should be provided in Section III of the emergency action plan).

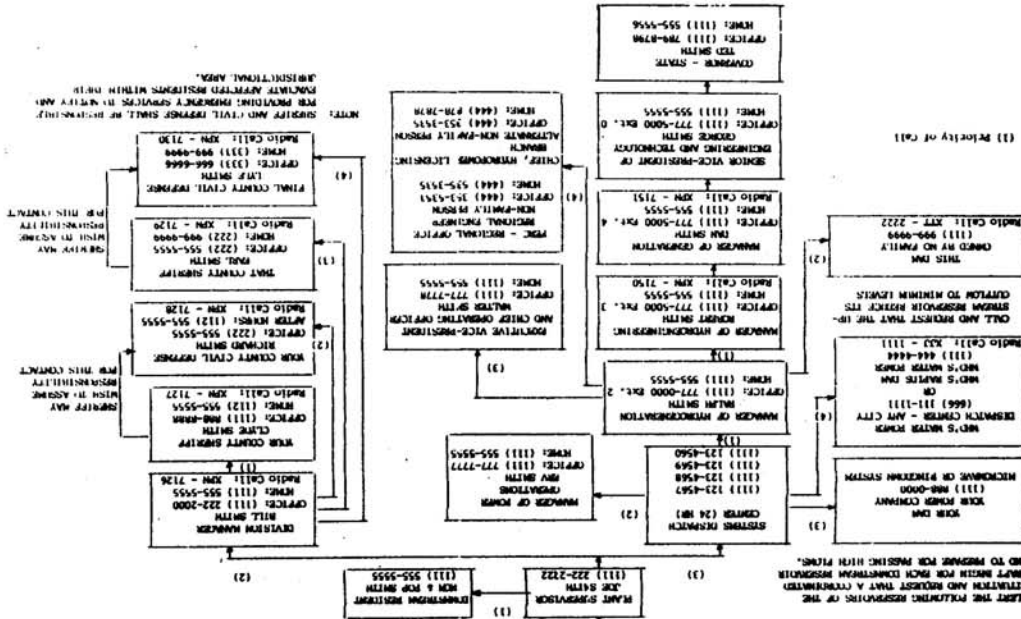
- Additional copies of the flowchart should be readily available to each individual having responsibilities thereon, and should be kept up-to-date through tests and revisions.

- Note: A sample flowchart is included on page 7 of these guidelines.

II. General Responsibilities Under the Emergency Action Plan

- Advise the operators of importance of the emergency action plan (EAP) and why the EAP is necessary. Describe operators duties in implementing the EAP. Give pointers on how to communicate the emergency situation to those who need to be contacted. Include samples of typical communications.

NOTE: This is only a sample notification flowchart. Each emergency situation should have its own flowchart showing the order of notification. All names and telephone numbers should be included in the flowchart as appropriate. Alternate means of communication should be included in the flowchart as appropriate. Example flowchart:



III. Notification Procedures

- Include in the notification portion of the EAP all persons to be notified as soon as an emergency situation develops. Include individual names and position titles, location, office and home telephone numbers, and radio communication frequencies and call signals, if available, for owner personnel, public officials, and other personnel, including alternates. For each emergency situation, clearly indicate who is to make a call and to whom it is to be made, and in what priority.
 - The number of persons to be notified by each responsible individual in the notification plan should be governed by what other responsibilities the person has been assigned.
 - Describe in detail the notification procedures for the two emergency situations:
 - A. Failure is imminent or has occurred
 - B. Potentially hazardous situation is developing
- Describe actions to be taken and contacts to be made. Priority of notification should address the actual emergency situation:
1. Detailed plan for notification
 - Residents and owners of property that are located immediately downstream of the dam within the boundary of potential inundation where available warning time is very limited. Give names and telephone numbers (day/night), and alternate means of communication. If not applicable, so state.
 - Licensee personnel. Give names and telephone numbers (day/night) of responsible individuals and alternate means of communication.
 - Law enforcement officials. Give names and telephone numbers (day/night) and alternate means of communication.

- Describe the chain of command. Licensee/exemptee/applicant (herein referred to as licensee) officials and alternates which must be notified should be designated and priority of notification determined. Notification of supervisory personnel on the licensee staff is desirable, if time permits. Advice may be needed concerning predetermined remedial action to delay, or mitigate the severity of, the failure. For example, a person may be dispatched to an unmanned dam during a major flood to observe and monitor the situation directly. The EAP should be coordinated with high enough levels of management to insure full awareness of organizational capabilities and responsibilities. It must always be developed as a result of coordination and consultation with other entities and agencies that will be affected by a failure, or have statutory responsibilities in warning and evacuation.
- The person(s) authorized to notify local officials should be determined and clearly set forth in each EAP. Under certain situations, such as where failure is imminent or has occurred, this authority may have to be delegated to the dam operator or local official and the responsibility should be clearly outlined in the EAP. The National Weather Service (NWS) has the general responsibility to issue flood warnings. Therefore, it may be beneficial to notify the NWS of any pending or actual dam break flooding so that its facilities could enhance warnings being issued.
- Designate means for keeping local authorities advised of conditions at the dam. The Commission does not intend for licensees to usurp the responsibility of governmental elements for evacuation of people. However, there may be situations where routine notification will not suffice, such as a resident located just below the dam. In this case, the licensee should arrange to notify that person directly. This should be coordinated with the pertinent public officials.
- Include any other information considered pertinent.

- Operators of other dams or water-retentions facilities. Give names and telephone numbers (day/night) and alternate means of communication. If not applicable, so state.
 - Managers and operators of recreation facilities. Give names and telephone numbers (day/night) and alternate means of communication. If not applicable, so state.
 - Appropriate Federal, State and local agencies. Give names and telephone numbers (day/night) and alternate means of communication. If not applicable, so state.
 - Others, as appropriate. Give names and telephone numbers (day/night) and alternate means of communication.
2. Posting of the Notification Flowchart and distribution of EAP
- Describe where the notification flowchart for each emergency situation will be posted. It should be in a prominent location readily accessible at the project site near a telephone and/or radio transmitter. A copy of the complete emergency action plan should also be available to the operators and dispatch center personnel.
 - Distribute the EAP to operational and supervisory employees and others who will be required to take certain actions when the plan is put into effect.

IV. Mitigation Activities

- A. General provisions for surveillance
 - The EAP should contain a discussion of provisions for surveillance and detection of an emergency situation and should clearly indicate that it can be implemented in a timely manner. An important consideration in the effectiveness of the EAP is the prompt detection and evaluation of information obtained from instrumentation and/or physical inspection procedures.
- B. Availability and use of alternate systems of communication
 - Describe alternative channels of communication to be used in case of failure of the primary system or failure of other systems immediately available.
- C. Response during periods of darkness
 - Describe actions to be taken to illuminate the spillway operating deck or other actions necessary to facilitate opening or closing of gates or other necessary actions. Describe emergency operation of spillway gates during power failure. Refer to E-3 of this section.
 - Describe special procedures for contacting the proper personnel and officials.
 - Include any other special instructions to the operators.
- D. Availability and use of alternate systems of communication
 - Describe special procedures for contacting the proper personnel and officials.
 - Include any other special instructions to the operators.
- E. Availability and use of alternate systems of communication
 - Describe special procedures for contacting the proper personnel and officials.
 - Include any other special instructions to the operators.
- F. Availability and use of alternate systems of communication
 - Describe special procedures for contacting the proper personnel and officials.
 - Include any other special instructions to the operators.

- Discuss time factor from actual emergency occurrence to awareness of emergency and its effect on the workability of the EAP. Timely implementation of the EAP is a crucial element in its effectiveness.
 - Describe any other specific actions to be taken.
- R. Surveillance at remotely controlled or unattended dams (not manned on a 24-hour per day basis).
- Describe any instrumentation (such as audible/visual alarms, video cameras, etc.) for monitoring behavior of unattended dams and how warning systems would be implemented.
 - Describe procedures for providing round the clock surveillance for periods of actual or forecasted high flows.
 - If not applicable, so state.
- C. Response during periods of darkness
- Describe actions to be taken to illuminate the spillway operating deck or other actions necessary to facilitate opening or closing of gates or other necessary actions. Describe emergency operation of spillway gates during power failure. Refer to E-3 of this section.
 - Describe special procedures for contacting the proper personnel and officials.
 - Include any other special instructions to the operators.
- D. Availability and use of alternate systems of communication
- Describe alternative channels of communication to be used in case of failure of the primary system or failure of other systems immediately available.

- o Describe proper procedures to activate the alternative channels of communication. Remember that you direct these instructions to your employees.
 - o Include any other special instructions.
- E. Emergency supplies and resources
1. Stockpiling of materials for emergency use or repair.
 - o Describe materials, their location and intended use.
 - o Describe equipment to be used, its location and who will operate it.
 - o Describe how the operator is contacted.
 - o Include any other special instructions.
 - o If not applicable, so state.

2. Coordination of flows

- o Describe the need for advanced coordination of flows based on weather and runoff forecasts. Include special instructions. Describe how the coordination is achieved and the chain of communication, including names and day/night telephone numbers of responsible personnel. The licensee is encouraged to coordinate with the National Weather Service (NWS) to monitor storms as well as the flood wave resulting from a dam break. The NWS may also be able to supplement the warnings being issued by using its own communication system.
- o Describe additional actions contemplated to respond to an emergency situation or failure at an unattended dam. Include periods of darkness, inclement weather, and non-business hours.

- o Describe actions to be taken to lower the reservoir water surface elevation. If not applicable, so state. Instruct operators on when and how this action should be taken.
 - o Describe actions to be taken to reduce inflow to the reservoir from the upstream dams or control structures. If not applicable, so state. Instruct operators or other persons responsible for contact with other owners on when and how this action should be taken.
 - o Describe actions to be taken to reduce downstream flows, such as increasing or decreasing outflows from downstream dams or control structures on the waterway on which the project is located or its tributaries. If not applicable, so state. Instruct operators on when and how this action should be taken.
 - o Describe any other actions to be taken.
3. Alternative sources of power for spillway gate operation and other emergency uses.
- o Describe the alternative sources of power, their location, and mode of operation, and if portable, the means of transportation and routes to be followed. Include the name and day/night telephone number of the operator. If not applicable, so state.
4. Other actions devised to mitigate the extent of possible emergencies.
- o Describe other site specific actions or conditions which in your judgment will contribute to mitigation of emergencies.

F. Other concerns and actions

- Describe any other concerns and actions to be taken.

V. Appendix

A. Description of the project

1. Provide a description of the project.

2. Provide a description of the upstream and downstream areas and topography.

R. Summary of study and analyses to determine extent of inundation

1. Identify and briefly describe the method selected to identify the inundated areas.
2. State all assumptions (including, but not limited to, reservoir inflow condition (normal or flood), temporal (time) and geometrical description of breach, Manning's "n" etc.) Several different assumptions could be made regarding the appropriate condition prevailing at the time of a dam failure.

However, it may be impractical to analyze each potential emergency which could be postulated. A fair weather dam break (reservoir at normal maximum full pool elevation, normal streamflow prevailing) is generally considered to have the most potential for loss of life. Therefore, the minimum condition to be considered is the fair weather dam break. However, failure during various flood flow conditions should be considered and should be used if they would identify special problems of flooding requiring changes and/or additions to the notification procedures. The Commission, or its authorized representative, retains the right to require, on a case-by-case basis, an investigation of other flood flow scenarios to ensure that all communities requiring notification by local officials have been identified.

3. The domino effect - a sequential failure of a multiple number of downstream dams as a result of failure of the dam for which the emergency action plan is being prepared - must be considered on a case-by-case basis. If the assumed failure of any licensee's dam would promote the failure of any dams downstream, the licensee has the responsibility to consider the domino effect in the routing of the floodwave downstream. The floodwave should be routed to the point where it no longer presents a hazard to downstream life or property (including downstream dams). Therefore, the licensee, after assuming a hypothetical failure of its dam, must assess the structural integrity of the downstream dam (based on engineering judgment or actual analysis) to determine whether it would be prudent to consider any of downstream dams to fail when subjected to the routed flood wave. If applicable, the details of domino effects should be described. If not applicable, so state.
4. Provide justification for each assumption. The assumptions made regarding the temporal and geometrical description of a breach is dependent on the type of dam being analyzed. Suggested breach parameters are included on page 21 and 22 of these guidelines.
5. Provide an elevation view of the dam and indicate the assumed breach.
6. Describe special considerations (such as reservoir slope stability).
7. Provide other helpful information, as appropriate.
8. If a dam-break analysis was made, provide results of the study. Include peak discharges and elevations and key locations, floodwave travel time to critical locations, velocity of flood wave. If a computer program was used, it may be appropriate to include a summary of the computer print-out.

9. Discuss where flood routing was terminated. It should usually be terminated where non-damaging flood levels are obtained. However, they may be terminated at a point where real-time flood warning information can be provided on a preplanned basis. (For example, if it is known that the time of failure was 12:05, p.m. and the floodwave can be monitored, it may be possible to determine that the floodwave will reach town X at approximately 4:20 p.m.; hence, real-time flood warning information). If the flood routing is terminated before non-damaging levels are obtained, describe in detail the plan for establishing and implementing real-time flood warning information.

C. Inundation Maps

• Inundation maps are required for all high and significant hazard developments unless an unusual condition exists. The requirements for an inundation map are as follows:

1. Identify the antecedent flow conditions on which the maps are based.
2. Describe how the inundation boundaries were plotted. As a minimum, show on the map and/or in a table the maximum inundation elevation and the travel time of the front of the dam break flood wave to critical locations.
3. The map should be developed at a scale sufficient to be used for identifying downstream inhabited areas within the area subject to possible danger. Inundated areas should be clearly identified. It may be appropriate to supplement the inundation maps with water surface profiles at critical areas showing the water surface elevation prior to failure and the peak water surface elevation after failure.

4. The best available topographic map should be used. The expected inundation following the assumed failure should be delineated on the map. The lines delineating the inundated area should be drawn in such thickness or form (solid line, dashed line, dotted line) as to identify the inundation limits as the main features of the map but not bold enough to obliterate houses or other features which are to be shown as being inundated by the flood waters. Clarity is important. When plotting inundation limits between cross sections used for the analysis, the lines should reasonably reflect the change in water levels with consideration given to topographic patterns and both natural and manmade features. When inundation lines enter the area of an existing lake or reservoir, they should be so drawn as to represent an increase in the water level of such lake or reservoir. Should this increased water level overtop the dam, the appropriate inundation lines should be drawn downstream of such dam to represent expected inundation in the downstream channel up to a point where an increase in water level will no longer represent danger to life, health or property. The area between the inundation lines representing the water level may be shaded to distinguish the area of inundation. Care should be taken to select a shading which will not obliterate the background information shown on the map.

5. Describe the accuracy and limitation of the information supplied on the inundation maps and how best to use the maps. Since local officials are likely to use the maps for evacuation purposes, a note should be included on the map to advise that, because of the method, procedures, and assumptions used to develop the flooded areas, the limits of flooding shown and flood wave travel times are approximate and should be used only as a guideline for establishing evacuation zones. Actual areas inundated will depend on actual failure conditions and may differ from areas shown on the maps.

6. If inundation maps are to be shown on several pages, a map index should be included to orient the individual pages.
 7. Include any other pertinent information.
- D. Plans for training, testing and annual review
1. Annual training of project operators and other responsible personnel.
 - o Describe plans to give detailed instructions to the operators, attendants and other responsible personnel on how to respond properly to a project emergency. Include plans for discussing procedures to be followed throughout the emergency and describe the chain of command during day/night or non-business hours.
 - o Describe plans to hold refresher seminars with operators.

2. Annual review and test of the state of readiness:
 - o Describe plans to make prompt updates of EAP from comprehensive review. Must annually supply FERC with statement that EAP has been tested, with inclusion of any needed revisions and updates or statement that no revisions and updates are needed. Provide all plan holders copies of all revisions. Mark pages "Revised MO/DA/YR/" and highlight revised material.
 - o Describe the annual test. State who will be contacted, when and how. The annual test should involve a simulated drill for one of the emergency situations. Testing of remote sensing equipment at unmanned dams should be included. Coordination and consultation with local government, law enforcement officials and other organizations should be made in order to enhance the realism of the test.
 - o Describe action to be taken.

- o State who determines if the test was successful.
- o State plans for submitting a critique of the test to Regional Engineer.
- o Describe the checkpoints.

E. Documentation

1. Provide documentation of consultations with Federal, State and local agencies, including public safety and law enforcement bodies. Provide letters of acknowledgement from the contacted agencies.
 - o Letters should indicate that each agency involved understands its responsibility for alerting and/or evacuating the public in those areas within its jurisdiction.
2. Provide letters or memoranda of contact
 - o Coordination is essential to ensure that local officials responsible for warning and evacuation of the public comprehend and accept their individual and group responsibilities. Participation in the preparation of the plan will enhance their confidence in the plan and in the accuracy of its components. Coordination will provide opportunities for discussion and determination of the order in which public officials should be notified, backup personnel, alternate means of communication, and special procedures for periods of darkness, inclement weather, non-business hours, etc. Differences in procedures for notification for different emergency situations should be coordinated prior to finalizing the notification plan(s).

- Advance preparations should include arrangements for such meeting(s) as are necessary with local and county governments, law enforcement officials, and other public officials who will be responsible for the warning and the evacuation of the occupants of the affected areas. The licensee should discuss the accuracy of the inundation maps or other means used to delineate the affected areas. Times available for response should also be discussed. Public officials to be notified and their priority of notification should be established. Special procedures should be developed for periods of darkness, inclement weather, and non-business hours.
- All positions critical to the execution of the emergency action plan should be covered 24-hours a day, 7-days a week. Alternative or backup personnel should be identified for all public officials to be notified. Alternative means of communication should be identified.
- Describe the coordination efforts. Include all letters directed by you to agencies or others and memoranda of meetings or conferences held.

TABLE 1

SUGGESTED BREACH PARAMETERS
(Definition Sketch Shown in Figure 1)

Parameter	Value	Type of Dam
Average width of Breach	$HW/2 \leq BR \leq 3HD$	Earthen, Rockfill
Note: BR = average width, not necessarily bottom width	$BR \geq 0.8 \times \text{Crest Length}$	Slag, Refuse
BR = bottom width for rectangle	$BR = \text{Crest Length}$	Concrete, Arch
BR ≠ bottom width for trapezoid	$BR = \text{Width of 1 or More Monoliths, usually } BR \leq 0.5 W$	Masonry, Gravity
Horizontal Component of Side Slope of Breach (Z)	$0 \leq Z \leq 2$	All
Note: Whether the shape is rectangular, trapezoidal, or triangular is not generally critical if the average width (BR) for each shape is the same. What is critical is the assumed average width (BR) of the breach	$Z = 0$	Masonry, Gravity
Time to Failure (TFH) (in hours)	$1/4 \leq Z \leq 2$	Earthen (Engineered, Compacted)
	$1 \leq Z \leq 2$	Slag, Refuse (Non-Engineered) Arch
	$0 < Z \leq \text{slope of valley walls}$	All
	$0.1 \leq TFH \leq 3$	Arch
Note: TFH is a function of height of dam and location of breach	$TFH \leq 0.1$ $0.1 \leq TFH \leq 0.3$	Masonry, Concrete
By logic:	$0.3 \leq TFH \leq 3.0$	Earthen (Engineered, Compacted)
a) Longer the time to failure, the wider the breach should be	$0.1 \leq TFH \leq 0.5$	Earthen (Non Engineered, Poor Construction)
b) The greater HD & storage volume is, the greater TFH and BR will probably be	$0.1 \leq TFH \leq 0.3$	Slag, Refuse
Definition: H - Height of Dam		
Z - Horizontal Component of Side Slope of Breach		
BR - Average Width of Breach		
TFH - Time to Fully Form the Breach		
W - Crest Length		

Comments: 1. The bottom of the breach should at least be at tailwater elevation or, if no tailwater, at the toe of the dam.

- 2. For a worst-case scenario, BR should be in the upper portion of recommended range and TFH should be in lower portion of recommended range.

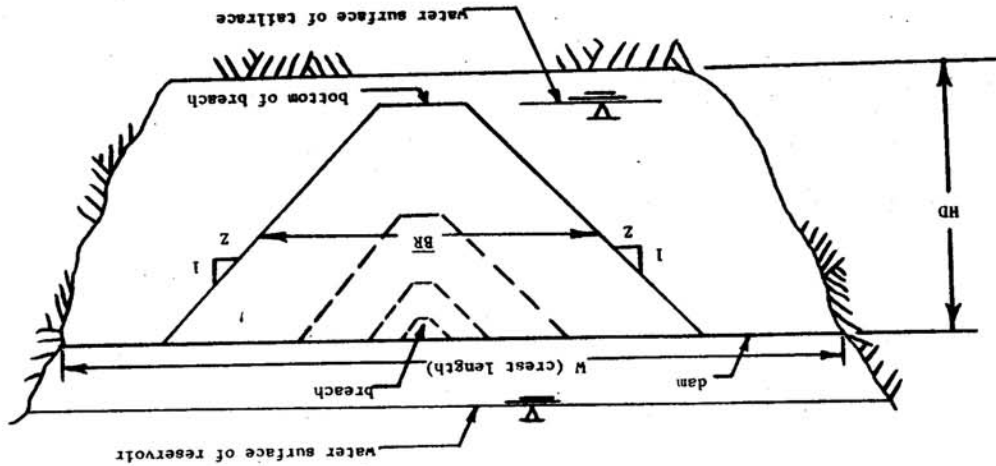


FIGURE 1. DEFINITION SKETCH OF BREACH PARAMETERS

5. Radiological Emergency Response Plan. Each owner of a hydroelectric project under jurisdiction of the Federal Energy Regulatory Commission located within a 10-mile radius of a nuclear plant licensed to operate shall prepare a radiological emergency response plan to be implemented in the event of a severe accident or incident resulting in the release of radioactive materials. A plan is required if the 10-mile radius includes any project structures such as the dam or powerhouse that are used in changing water flows, or project facilities that would be affected by radioactive materials in such a manner that would interfere with project operations. The plan will be a supplement to the Emergency Action Plan and made a part thereof. It should contain, but not necessarily be limited to:

- A. Detailed procedures for: The evacuation of power plant personnel when advised or directed to do so by the appropriate State or local government official; setting of gate openings; continuation, curtailment, or cessation of generation; coordination with, and notification of, customers, power pools, and other interconnected power suppliers; advance coordination with operators of upstream and downstream reservoirs; and/or other actions as considered appropriate.
- B. A list of State and/or local government officials who are responsible for notification of hydroelectric project personnel that a nuclear accident or incident is developing (or has occurred). This part of the plan should specifically identify the State or local government officials responsible for notifying individual(s) in the hydroelectric power plant owner's organization. It should also include provisions for keeping the owner's key personnel currently informed on the developing situation to allow timely action or response at the affected hydroelectric project. This portion of the plan should identify, if other than the officials noted above, the State or local government agency representatives authorized to direct or advise implementation of action, such as evacuation of the area, or other appropriate action.

C. Notification plans should be developed for alerting the following concerned individuals of proposed plan implementation. Reference can be made to the notification procedures contained in the main body of the emergency action plan if appropriate.

1. Local, State, and Federal government officials, including the FERC Regional Engineer or alternate.
2. Operators of water-related facilities
3. Residents and owners of properties that could be endangered by the change in project operation.
4. Supervisors and other company officials.

The radiological emergency response supplement to the emergency action plan shall be posted with the main body of the emergency action plan in a prominent location accessible to operating and supervisory personnel. Such personnel shall be familiar with their responsibilities under the plan. Training of these personnel shall be conducted to assure adequate and timely performance of their duties in the event of an emergency.

As with the other parts of the emergency action plan, all aspects of the plan are subject to continuous review and updating. At least once a year, a comprehensive review shall be made of the plan. Any revisions shall be made after consultation with Federal, State, and local agencies, and electric power producers and users, as appropriate. The need for an update shall be reported to the Regional Engineer no later than December 31 of each year.

The affected owner will be requested to file a plan no later than 3 months after the date of issuance of a license to operate a nuclear plant.

If the Regional Engineer determines that an emergency action plan is not required for the hydroelectric project, the radiological supplement shall, nevertheless, be filed. Evidence of coordination with the State or local director of civil defense, or the appropriate official responsible for emergency preparedness, should be obtained and forwarded with the plan. Three copies should be submitted to the Regional Office.