

**TITLE 785. OKLAHOMA WATER RESOURCES BOARD  
CHAPTER 25. DAMS AND RESERVOIRS**

**SUBCHAPTER 1. GENERAL PROVISIONS**

**785:25-1-3. Violations and penalties**

(a) Under Section 105.20 of Title 82 of the Oklahoma Statutes, the continued use of works which are unsafe, after receiving notice to repair, and the refusal to change unsafe works when directed to do so, or the injury or obstruction of waterworks shall be a ~~misdemeanor~~ misdemeanor and each day such violation continues shall be a separate violation.

(b) Under the Oklahoma Dam Safety Act (82 O.S. Supp. 1992, §§110.1 et seq.), the Board is authorized to issue emergency orders without prior notice and hearing and orders after notice and hearing requiring an owner to take action as necessary to put a dam in safe condition. In addition, the Board may impose administrative penalties against owners of dams who fail, refuse or neglect to comply with the provisions of the Oklahoma Dam Safety Act. Procedures for imposition of such penalties are found in Subchapter 11 of this Chapter.

**SUBCHAPTER 3. RESPONSIBILITY, CLASSIFICATION AND DESIGN STANDARDS**

**785:25-3-2. Owner's responsibility**

(a) **General.**

(1) Owners of dams to which the provisions of this Chapter apply shall have the responsibility to provide for the safety of such works by making any necessary changes to put the works in a safe condition.

(2) Such responsibility includes but is not necessarily limited to the following: the filing of an application to construct, enlarge, alter or repair the dam pursuant to Subchapter 5; the modification of the dam to meet applicable minimum requirements in this Subchapter; and the adequate maintenance, operation, and inspection of ~~a~~ an existing dam.

(b) **Multiple owners.**

(1) When there is more than one owner of a dam, the Board shall consider all such owners responsible for the safety of such dam unless evidence to the contrary shows otherwise.

(2) The Board shall provide copies of inspection reports to at least one owner of record at the Board and shall provide notice of hearing on dam safety related matters to such owner with an instruction that the notice shall be delivered or mailed to all owners.

(3) Unless otherwise agreed by all the owners and the Board, the Board may, after such notice and hearing, order all the owners to take whatever remedial action is necessary to put the dam in a safe condition.

(4) The Board will not attempt to delineate levels of responsibility or allocate particular items of action among the owners.

(c) **Transfer of ownership.** Upon transfer of ownership of the works, the new owner shall notify the Board of such transfer.

**785:25-3-6. Minimum spillways performance standards**

(a) **General performance standards.**

- (1) Except as otherwise provided in this Chapter, all dams must meet or exceed the following performance standards as determined by analysis of plans and specifications for the dam and existing site conditions.
- (2) Owners of existing dams which do not meet the following performance standards must make necessary changes in the dam to meet the applicable performance standards.
- (3) The discharge capacity and/or storage capacity of the project shall be capable of passing the indicated spillway design flood without infringing on the minimum freeboard requirements, provided that a design which includes overtopping of the dam may be authorized if specifically approved by the Board.
- (4) The minimum performance standards expressed as magnitude of spillway design flood and minimum freeboard will be assigned to the various size and hazard potential classification determined under 785:25-3-3 as follows described in Appendix A.

~~(b) **Minimum Performance Standards.**~~

MINIMUM SPILLWAY			
SIZE	HAZARD	DESIGN FLOOD	MINIMUM FREEBOARD
Small	Low	25% PMF	0 Feet
Small	Significant	40% PMF	0 Feet
Small	High	50% PMF	1 Foot
Intermediate	Low	25% PMF	1 Foot
Intermediate	Significant	50% PMF	1 Foot
Intermediate	High	75% PMF	3 Feet
Large	Low	50% PMF	1 Foot
Large	Significant	75% PMF	1 Foot
Large	High	100% PMF	3 Feet

~~(e)~~(b) **Amending minimum freeboard.** The minimum freeboard requirement may be amended by the Board on a case-by-case basis for good cause shown by the owner.

~~(d)~~(c) **Probable maximum flood.**

- (1) PMF means and refers to the Probable Maximum Flood and is defined as the flood that may be expected from the most severe combination of critical meteorologic conditions, defined as the Probable Maximum Precipitation (PMP), and critical hydrologic conditions that are reasonably possible in the regions listed in Hydrometeorological Report No. 51, National Weather Service.

(2) Since design floods are usually determined by using mathematical computations through computer modeling and since several different acceptable models are available, flood design calculations must fall within plus/minus 5% PMF of the Board's current model results.

(3) The PMF storm should be the most conservative PMP storm type and of appropriate duration to adequately reflect the size and hydrologic characteristics of the watershed in which the dam is located.

(4) Regional Probable Maximum Precipitation Study for Oklahoma, Arkansas, Louisiana, and Mississippi (Applied Weather Associates, 2019) shall be used in determining precipitation depth, area, and duration relationships for the PMP.

~~(e)~~(d) **PMF on dam designated for regulation.** Adam which the Board has determined is subject to regulation because of its high hazard potential, although otherwise considered too small, shall be required to safely pass 25% PMF with no minimum freeboard.

~~(e)~~(e) **Dams constructed prior to June 13, 1973.** Any dam constructed prior to June 13, 1973, classified as having high hazard-potential as described in 785:25-3-3 shall be required to pass a minimum design flood as follows:

- (1) Small size - 25% PMF with one foot of freeboard.
- (2) Intermediate size - 50% PMF with no minimum freeboard.
- (3) Large size - 75% PMF with no minimum freeboard.

~~(e)~~(f) **Dams constructed after 1973 without Board approval.** An owner of a dam constructed after 1973 without prior approval by the Board shall remove the dam or may request a variance or waiver from the requirement for submittal of plans and specifications as provided for in 785:25-5-2 and 785:25-5-3, provided the owner of the dam shall submit an application containing the following:

- (1) A topographic map of the dam site showing the location of spillway and outlet works.
- (2) Drawings showing the length, width, and height of dam.
- (3) Detailed plans of spillway structures, spillway profile, and procedures for operating of the spillway structure.
- (4) Hydrologic and hydraulic analysis report as described in Hydrologic and Hydraulic Guidelines for Dams in Oklahoma, Oklahoma Water Resources Board, Dam Safety Program, August 2011.
- (5) Complete a dam breach inundation analysis and map if Board staff determines the dam may be a significant or high hazard-potential structure.
- (6) Inspection of the dam by a registered Professional Engineer and submit a written inspection report to the Board not later than 30 days after the inspection and shall contain information as set forth in a Board hazard inspection report.
- (7) Pay minimum application fee as provided in 785:5-1-9(a).
- (8) In addition the applicant may be required to submit a detailed geotechnical investigation and analysis of the dam and report on such investigation. The geotechnical investigation shall include a minimum boring layout as follows:
  - (A) One (1) crest boring extending through the embankment and foundation materials to bedrock.
  - (B) Two (2) crest borings extending through the embankment and foundation materials to bedrock, one near each abutment.

- (C) One (1) boring extending through the embankment and foundation materials to bedrock near the mid-height on the downstream slope of the dam.
- (D) One (1) boring extending through the embankment and foundation material to bedrock along the toe of the dam.

## **SUBCHAPTER 5. APPLICATIONS AND APPROVAL OF CONSTRUCTION**

### **785:25-5-4. Additional report information**

An engineer's report giving details necessary for analysis of the structure and ~~appurtenants~~ appurtenances shall be submitted with the plans and specifications. Included as a part of the report shall be the following:

- (1) Formula and assumptions used in design;
- (2) Hydrologic data used in determining runoff from the drainage areas including copies of any records that the applicant has of flood flows and precipitation for the region;
- (3) Foundation and materials investigations; and
- (4) All other information which would aid in evaluating the design.

## **SUBCHAPTER 7. POST APPROVAL ACTIONS**

### **785:25-7-7. Emergency action plans**

- (a) Owners of existing or proposed dams classified as high hazard-potential, regardless of the size of such dams, and any other dam as determined by the Board, shall create and maintain an EAP that utilizes the recommendations, as determined by the Board, of the "Federal Guidelines for Dam Safety, Emergency Action Planning for Dams ~~Owners~~," published ~~August 2004~~ July 2013 by the Federal Emergency Management Agency. The owner shall submit a copy of the EAP to the Board.
- (b) Owners shall annually review their EAPs to assure they are still accurate and applicable, and submit any updates to the EAPs to the Board.

## **SUBCHAPTER 9. ACTIONS AFTER CONSTRUCTION**

### **785:25-9-1. Inspections of dams**

- (a) **Oversight vested in Board.** Oversight of the maintenance and operation of constructed dams and reservoirs insofar as necessary to safeguard life and property from injury by reason of the failure thereof is vested in the Board.
- (b) **Periodic inspections.** Except for low hazard potential dams, owners are required to have their dams inspected by qualified persons periodically according to a schedule prepared by the Board to meet the requirements of paragraphs (1) and (2) of this subsection ~~and shall include review of the Emergency Action Plan and of the operation and maintenance manual to assure they are still accurate and applicable.~~ Periodic inspections of dams shall be according to hazard potential classifications as follows:
  - (1) High hazard. High hazard potential dams shall be inspected at least once annually.
  - (2) Significant hazard. Significant hazard shall be inspected at least once every three years.

(3) Low hazard. Low hazard potential dams shall be inspected at least once every five years, which inspection shall be conducted by the owner and shall consist of a review of the hazard classification on forms provided by the Board.

(4) Significant or high hazard dams in an unsatisfactory or poor condition, described in Section 6 of the National Dam Safety Review Board's Guidelines for Updating the 2008 National Inventory of Dams (NID), April 2008, as determined by the Board shall be inspected by a registered Professional Engineer at the expense of the owner at least every six months until such time as the deficiencies have been corrected.

(5) Periodic inspections shall be conducted by the end of the calendar year indicated by the schedule above.

(c) **Expense of periodic inspections.** Periodic inspections shall be at the owner's expense (except for low hazard potential periodic inspections) and shall be conducted by a Registered Professional Engineer hired by the owner, who ~~shall have training and/or construction of dams and reservoirs~~ is licensed in the state of Oklahoma, and shall have training and/or experience concerning the analysis, design, and/or construction of dams and reservoirs, or by an engineer of any United States governmental agency acting in his official capacity. Provided that inspections of low hazard classification dams may be conducted by persons who are not Registered Professional Engineers but who are trained in inspecting dams. ~~If a periodic inspection is conducted by the owner or his representative, a written inspection report shall be submitted to the Board not later than 30 days after the inspection and shall contain information as set forth in a Board's hazard verification report.~~

(d) **Unscheduled inspections.** Unscheduled (non-periodic) inspections such, as those conducted in response to complaints, after major heavy precipitation events, after earthquakes within 50 miles of a high or significant hazard potential dam that measure 5.0 or greater on the Richter magnitude scale, or in emergency situations, may be conducted by Board staff, or the Board may require the owner to conduct an unscheduled inspection at the owner's expense. No fee for such inspection shall be due, provided that a request for inspection by other parties shall be governed by 785:25-9-6.

(e) **United States dams not subject to inspection.** Any dam *constructed by the United States or its duly authorized agencies shall not be subject to inspection while under the supervision of officers or the United States.* [82:105.27]

(f) **Board to notify when inspection due; violation.** The Board shall notify persons shown by its records to own the dam of the date the periodic inspection of the dam is due. Failure to have the inspection completed shall constitute a violation of Board rules.

(g) **Minimum standards.** Except for low hazard potential dams, qualified persons shall submit a written report describing any dam safety deficiencies observed and outline remedial actions to be taken to address those deficiencies as follows:

(1) Engineering inspection reports shall be prepared for each inspection completed. The inspecting engineer shall record their findings of the inspection and submit a written inspection report to the Board not later than 30 days after the inspection.

(2) All inspections shall also include documentary digital photographs of the dam, auxiliary spillway, principal spillway inlet structure, principal spillway outlet, and potential safety concerns. When explanation is needed to identify or describe the safety concern, notes shall be included in the written report to provide this explanation. Photographs shall be attached to the completed inspection report.

(3) Inspection reports shall include a schedule of corrective actions to be taken to address dam safety deficiencies.

(4) Periodic inspection reports shall also include review of the Emergency Action Plan and of the operation and maintenance manual to assure they are still accurate and applicable, as well as any changes in downstream development or other conditions if applicable.

**785:25-9-3. Correction of deficiencies (not creating imminent peril)**

(a) *When an owner fails, neglects or refuses to comply with the Oklahoma Dam Safety Act, rules of this chapter, or orders of the ... Board, and there is no imminent peril to the public health or welfare shown the Board may, after notice and opportunity for hearing; issue an order requiring such owner to take whatever action the Board deems necessary to place the dam in a safe condition, meet the requirements of the Oklahoma Dam Safety Act, rules of the Board, or the previous orders of the Board [82:110.10].*

(b) *Actions which can be ordered may include but are not limited to lowering the level of or removing all water in the reservoir, providing an adequate warning to the public downstream, repair or modification of the existing dam after having the appropriate application for approval of plans and specifications granted, cease all ~~construction~~-construction work on a dam, and implementation of an appropriate operation and maintenance plan [82:110.10].*

(c) *If after such hearing it shall be determined to order such amendments, modifications or changes, the owner shall submit, if necessary under 785:25-5-1, plans and specifications for Board approval. Upon approval of the plans and specifications, the Board shall direct the time within which such modification, alteration, or construction shall be completed.*

(d) *In determining whether amendments, modifications or changes are necessary to protect life and insure safety of the dam, the Board shall take into consideration the possibility that the dam and reservoir might be endangered by overtopping, seepage, settlement, erosion, cracking, earth movement, or other conditions which exist in any area in the vicinity of the dam or reservoir.*

(e) *Amendments, modifications or changes may include routine maintenance items that do not require plans and specifications, such as removal of trees on an earthen embankment, establishing vegetation cover to prevent erosion, or updating a warning and evacuation plan, etc. Amendments, modifications or changes may also include alterations or repairs which require submittal and approval of plans and specifications, including but not limited to changing the spillway design capacity, rebuilding embankments, etc.*

**785:25-9-5. Correction of deficiencies creating imminent peril**

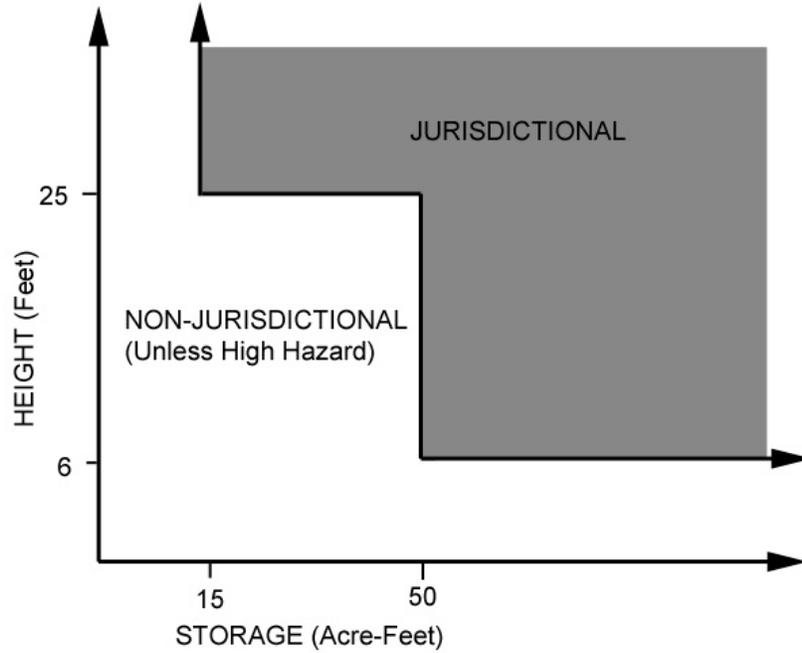
(a) *When an owner fails, neglects or refuses to comply with the Oklahoma Dam Safety Act, rules of this chapter, or orders of the Board, and there is an imminent peril to the public health or welfare shown, the Executive Director of the Board, or Assistant Director in the absence of the Executive Director, may, without notice or opportunity for hearing, issue an emergency order requiring such owner to take actions the Board deems necessary to place the dam in a safe condition. Such emergency order shall indicate the finding of imminent peril and shall specify the actions that are to be taken immediately. The order shall also specify a time and place for hearing to be held after such actions are taken [82:110.10]. In determining whether an imminent peril to the public health or welfare exists, the Board may consider the following:*

- (1) The condition of any dam or reservoir is so dangerous to the safety of life or property as not to permit time for the issuance and enforcement of an order after notice and hearing relative to maintenance or operation; or
  - (2) Passing imminent floods threaten the safety of any dam or reservoir.
- (b) The Board may, if the owner cannot be served or is otherwise unable to act, immediately employ remedial measures. The remedial measures the Board may take in such an emergency include but ~~is~~are not limited to any of the following:
- (1) Lower the water level by releasing water from the reservoir;
  - (2) Completely empty the reservoir; or
  - (3) Take such other steps as may be essential to safeguard life and property.
- (c) The cost and expenses of the remedial measures taken by the Board, including cost of any work done to render a dam or reservoir or its appurtenances safe, shall be recoverable by the State from the owner by action brought by the Board in the district court of the district wherein the dam or reservoir or any part thereof is situated.

**APPENDIX A.**

**JURISDICTION OF BOARD BY SIZE AND HAZARD CLASSIFICATION**

**JURISDICTION OF BOARD BY SIZE AND HAZARD CLASSIFICATION**



Appendix B. Minimum Spillway Performance Standards [NEW]

MINIMUM SPILLWAY

SIZE	HAZARD	DESIGN FLOOD	MINIMUM FREEBOARD
Small	Low	25% PMF	0 Feet
Small	Significant	40% PMF	0 Feet
Small	High	50% PMF	1 Foot
Intermediate	Low	25% PMF	1 Foot
Intermediate	Significant	50% PMF	1 Foot
Intermediate	High	75% PMF	3 Feet
Large	Low	50% PMF	1 Foot
Large	Significant	75% PMF	1 Foot
Large	High	100% PMF	3 Feet