

**CHAPTER 20**  
**DAM SAFETY STANDARDS**

**Authority**

N.J.S.A. 58:4-1 et seq. and 13:1D-1 et seq.

**Source and Effective Date**

R.2000 d.219, effective April 28, 2000.  
See: 31 N.J.R. 3897(a), 32 N.J.R. 2081(a).

**Executive Order No. 66(1978) Expiration Date**

Chapter 20, Dam Safety Standards, expires on April 28, 2005.

**Chapter Historical Note**

Chapter 20, Bureau of Water Control, was filed and became effective prior to September 1, 1969.

Subchapter 3, , was repealed by R.1977 d.477, effective December 16, 1977. See: 9 N.J.R. 461(a), 10 N.J.R. 10(c).

Chapter 20, , was repealed and a new chapter, Dam Safety Standards, was adopted as R.1985 d.214, effective May 6, 1985. See: 16 N.J.R. 790(a), 17 N.J.R. 1081(a).

Pursuant to Executive Order No. 66(1978), Chapter 20, Dam Safety Standards, was readopted as R.1990 d.276, effective May 2, 1990. See: 22 N.J.R. 279(a), 22 N.J.R. 1760.

Pursuant to Executive Order No. 66(1978), Chapter 20, Dam Safety Stanards, was readopted as R.1995 d.266, effective April 28, 1995. See: 27 N.J.R. 795(a), 27 N.J.R. 2210(a).

Pursuant to Executive Order No. 66(1978), Chapter 20, Dam Safety Standards, was readopted as R.2000 d.219, effective April 28, 2000. See: Source and Effective Date. See, also, section annotations.

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DESIGN CRITERIA FOR DAM CONSTRUCTION;  
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**Cross References**

Flood control, dams, engineering review, see N.J.A.C. § 7:13-2.12.

**SUBCHAPTER 1. APPLICATION PROCEDURE;  
DESIGN CRITERIA FOR DAM  
CONSTRUCTION; DAM INSPECTION  
PROCEDURE**

**7:20-1.1 Scope and applicability**

(a) The rules in this subchapter were adopted pursuant to the authority of N.J.S.A. 58:4-1 et seq., as amended by the Safe Dam Act of 1981, and N.J.S.A. 13:1D-1 et seq.

1. These rules set forth procedures for application to construct, repair or modify a dam, as defined in N.J.A.C. 7:20-1.2, and set standards for design and maintenance of dams. These rules also establish a dam inspection procedure.

2. Any dam which raises the waters of a stream five feet or less above its usual, mean, low water height falls under the jurisdiction of the Flood Hazard Area Control Act, N.J.S.A. 58:16A-50 et seq.

3. The requirements in this subchapter shall not affect or relate to a dam or reservoir in the pinelands area, as designated by subsection a. of section 10 of P.L. 1979, c.111 (C. 13:18A-11), which will raise the waters of any river or stream less than eight feet above the surface of the ground where the drainage area above the same is less than one square mile in extent and where the water surface created by the dam or reservoir is less than 100 acres in extent except that the commissioner may investigate and take appropriate action regarding any dam or reservoir about which he has a security or safety concern. With respect to dams and reservoirs located on lands utilized for agricultural or horticultural purposes within the pinelands area, the commissioner's actions shall be undertaken after consultation with the Secretary of Agriculture. See N.J.S.A. 58:4-1, P.L. 1985, c. 33, § 1 and 2.

Amended by R.1990 d.276, effective June 4, 1990.

See: 22 N.J.R. 279(a), 22 N.J.R. 1760(a).

Added authority N.J.S.A. 13:1D-1 et seq.

**7:20-1.2 Definitions**

The following words and terms, as used in this chapter, shall have the following meanings, unless the context clearly indicates otherwise.

“Applicant” means any person making application for a dam permit.

“Auxiliary spillway” means the second used spillway during flood flows which is not the emergency spillway.

“Dam” means any artificial dike, levee or other barrier, together with appurtenant works, which is constructed for the purpose of impounding water, on a permanent or temporary basis, that raises the water level five feet or more above the usual, mean, low water height when measured from the downstream toe-of-dam to the emergency spillway crest or, in the absence of an emergency spillway, the top-of-dam.

“Department” means the New Jersey Department of Environmental Protection.

“Design freeboard” means the minimum freeboard which would exist during passage of the design flood.

“Division” means the Division of Engineering and Construction in the Department of Environmental Protection.

“Emergency spillway” means the spillway capable of passing the spillway design storm with the principal and/or auxiliary spillway blocked.

“Environmental impact statement” means a report which describes the real and potential impacts which will or may result from the construction and operation of a proposed dam project, the adverse environmental impacts which cannot be avoided, the steps to be taken to minimize adverse impacts and the alternatives to the project with reasons for the acceptability or unacceptability.

1. The report shall address real or potential impacts upon ecology, natural resources, historical and archeological resources, recreational resources, aesthetic resources, endangered and non-game species, fisheries and any other identifiable impacts; and

2. The report shall include a listing of qualifications of those preparing the report and a reference list of pertinent published information relating to the project, the project site and the surrounding region.

“Formal inspection” means the inspection by a New Jersey licensed professional engineer to reevaluate the safety and integrity of the dam and appurtenant structures to determine if the structure meets current design criteria, including a field inspection and a review of the records on project design, construction and performance.

“Freeboard” means the vertical dimension between the crest of the embankment of a dam (without camber) and the reservoir water surface at the spillway design flood stage.

“Height-of-dam” means the vertical dimension from the lowest point in the stream bed or ground surface at the downstream toe of the dam to the elevation of the top of dam (without camber).

“Independent Review Board” means one or more independent professional engineers who are qualified in the design, construction and rehabilitation of dams to perform a review of the project design and construction.

“Informal inspection” means the visual inspection of the dam by the dam owner or operator to detect apparent signs of deterioration or other deficiencies of the dam structure or function.

“Levee” or “dike” means any artificial barrier together with appurtenant works that will divert or restrain the flow of a stream or river.

“One-hundred-year storm” means the storm which is estimated to have a one percent chance, or one chance in 100, of being equalled or exceeded in any one year.

“Outlet” means an opening through which water can be freely discharged from a reservoir for a particular purpose.

“Owner and/or operator” means any person who owns, controls, operates, maintains, manages or proposes to construct a dam.

“Permit” or “dam permit” means all approvals required under N.J.S.A. 58:4-1 et seq. for the construction and operation of a dam.

“Person” means any individual, proprietorship, partnership, association, corporation, municipality, county or public agency.

“Pipe conduit” means any hollow tube which conveys water through a dam from a reservoir, either as a spillway or as a drain.

“Principal spillway” means the primary or first used spillway during normal inflow and flood flows.

“Probable maximum precipitation” or “(PMP)” means the theoretically greatest depth of precipitation for a given duration that is physically possible, over a given size storm area, at a particular geographic location, at a certain time of year.

“Regular inspection” means the visual inspection of a dam by a New Jersey licensed professional engineer to detect any signs of deterioration in material, developing weaknesses or unsafe hydraulic or structural behavior.

“Reservoir” means any impoundment or any potential impoundment that will be created by a dam, dike or levee.

“Spillway” means a structure other than low flow outlets, over or through which flood flows are discharged.

“Spillway design storm” means the storm upon which the hydraulic capacity of the spillway structure is designed.

“Toe-of-dam” means the junction of the downstream face of a dam with the ground surface or the invert of the outlet pipe, whichever is the lowest point.

Amended by R.1990 d.276, effective June 4, 1990.

See: 22 N.J.R. 279(a), 22 N.J.R. 1760(a).

Added “Emergency spillway”, “Independent Review Board”, and “Toe-of-dam”. Revised “Division” and “Height-of-dam”.

Amended by R.1995 d.266, effective June 5, 1995.

See: 27 N.J.R. 795(a), 27 N.J.R. 2210(a).

### 7:20-1.3 Permit-by-rule

(a) All dams must be designed, constructed, operated, maintained or removed in compliance with the rules in this subchapter except as set forth below: