

WEST VIRGINIA

Citation

The West Virginia Dam Control & Safety Act was enacted in 1973 and is contained in Chapter 22-14, Code of West Virginia. The Act was last amended in 1992. Dam Control Regulations are found in Title 47, Series 34 under the Division of Environmental Protection (DEP) regulations, and first became effective in 1982.

Definitions/Dam Classifications

Section 22-14-3 of the Dam Control & Safety Act defines the term *dam* as "an artificial barrier or obstruction, including any works appurtenant to it and any reservoir created by it, which is or will be placed, constructed, enlarged, altered or repaired so that it does or will impound or divert water." For purposes of regulation, jurisdictional dams are those which are a) 25 feet or more in height which can impound 15 acre-feet or more of water, or b) six feet or more in height and impound 50 acre-feet or more of water. Dams not under state jurisdiction include federal dams, farm ponds and structures not normally impounding water. *Dam height* is measured from the natural bed of a stream or watercourse at the downstream toe of the barrier.

Section 3.5 of the regulations lists as one of the requirements of the process of application for a certificate of approval the determination of the hazard potential of the proposed dam. The hazard potential is determined by the applicant and is based upon the potential loss that would result due to a failure.

Class 1 (High Hazard) Dams - Class 1 dams are those dams located where failure may cause loss of human life or major damage to dwellings, commercial or industrial buildings, main railroads, important public utilities, or where a high risk highway may be affected or damaged. This classification must be used if failure may result in the loss of human life.

Class 2 (Significant Hazard) Dams - Class 2 dams are those dams located where failure may cause minor damage to dwellings, commercial or industrial buildings, important public utilities, main railroads, or cause major damage to unoccupied buildings, or where a low risk highway may be affected or damaged. The potential for loss of human life resulting from failure of a Class 2 dam must be unlikely.

Class 3 (Low Hazard) Dams - Class 3 dams are those dams located in rural or agricultural areas where failure may cause minor damage to nonresidential and normally unoccupied buildings, or rural or agricultural land. Failure of a Class 3 dam would cause only a loss of the dam itself and a loss of property use, such as use of related roads, with little additional damage to adjacent property. The potential for loss of human life resulting from failure of a Class 3 dam must be unlikely. An impoundment exceeding forty (40) feet in height or four hundred (400) acre-feet storage volume shall not be classified as a Class 3 dam. A waste disposal dam, the failure of which may cause significant harm to the environment, shall not be classified as a Class 3 dam.

Class 4 (Negligible Hazard) Dams - Class 4 dams are dams where failure is expected to have no potential for loss of human life, no potential for property damage and no potential for significant harm to the environment. Examples of Class 4 dams include: dams across rivers, failure of which under any conditions will not flood areas above normal streambank elevations; dams located in the reservoir of another dam which, under any conditions, can contain water released by failure of the Class 4 dam; and dams in series where the toe of the Class 4 dam(s) is in close proximity to the reservoir of a dam which can contain failure of the Class 4 dam(s) under any condition. In considering a request for a Class 4 designation, the director may require written concurrence from the owner(s) of downstream dams that

may be affected by failure of the Class 4 dam. Approval for use of this classification is vested in the director, and will be based on engineering evaluation of the dam(s) and downstream areas in question.

Jurisdiction/Powers of the Department

Responsibility for the dam safety program lies with the West Virginia Department of Environmental Protection. Powers and duties of the department (and its director) are listed in Section 22-14-4 of the Dam Control & Safety Act, and include the following:

- a. To exercise regulatory jurisdiction over dams;
- b. To review applications for certificates of approval, and to grant, modify, amend, revoke, restrict, or deny such certificates;
- c. To adopt, modify, repeal and enforce rules, and to issue orders;
- d. To take any lawful action necessary for the enforcement of the provisions of the statutes;
- e. To establish fees for application review and certificate issuance;
- f. To make any investigation or inspection necessary implement and enforce the law, including the right of entry upon public or private property of any owner; and
- g. To prepare and publish criteria for the design, construction, repair, inspection, and maintenance of jurisdictional dams.

Permit/Approval Process

Section 22-14-5 of the Dam Control & Safety Act requires that persons wishing to place, construct, enlarge, alter, repair, remove or abandon any jurisdictional dam first apply for and receive a certificate of approval from DEP. Applications must be made on forms prescribed by DEP. Section 22-14-6 requires that plans and specifications be in the charge of and sealed by a registered professional engineer. Section 22-14-7 provides that the director must approve or disapprove an application with 60 days of its receipt, and upon approval shall cause notice of the application to be published in a Class I legal advertisement. In accordance with the statute, NRCS dams are not reviewed. Finally, Section 22-14-8 authorizes the director, under certain circumstances, to revoke or suspend certificates of approval, or amend the terms and conditions of a certificate.

47-34-5 of the regulations spells out in detail the requirements for applications and the accompanying plans, specifications, maps and drawings. Included in the plans requirements are a project narrative, emergency warning plans, design analysis (including hazard classification, and geotechnical, laboratory, and hydrologic investigations), design requirements (including specifics on design storms, storage and discharge, surface drainage, spillways, and landslide potential). Other criteria listed in the regulations are a geotechnical evaluation, stability requirements, special considerations for gravity structures, and instrumentation.

Also contained in the regulations, under 47-34-8, construction of a dam, are parameters for site development and construction, including site preparation and construction requirements. Section 47-34-15 contains rules for operation and maintenance of dams.

Inspection Process

State

The inspection program is authorized under Sections 22-14-9, 22-14-11 and 22-14-4(i) of the Dam Control & Safety Act. DEP conducts construction inspections to assure compliance with approved plans and specifications. While these inspections are carried out by state personnel, any tests or work necessary to provide adequate supervision during construction are done at the owner's expense. If the department finds that the work is not in compliance with approved plans, the director shall notify the owner and order immediate compliance. The owner is required to notify the department upon completion of the dam. In accordance with the statute, state dam safety program inspection of NRCS dams under construction is not permitted.

Owner

Regulations section 47-34-15.4 deals with inspection, specifically the responsibilities of dam owners in this respect. Inspections must be conducted by a registered engineer once every seven days during construction, and after heavy rainfall. Annual inspections of completed dams are required for three years after construction; then high hazard dams are to be inspected at least once every two years. Lower hazard dams have less frequent inspection requirements. Dams with serious problems (as defined in Section 15.5.2) must be inspected as scheduled by Dam Safety Program. According to the provisions of Section 47-34-8 of the regulations, owners must submit written monthly inspection reports to the department during dam construction, and upon the completion of inspections required by Section 47-34-15 for existing dams.

Owner Non-Compliance/Violations/Penalties

If DEP finds a dam being constructed or operated not in compliance with the terms and conditions of the certificate of approval or with approved plans and specifications, the director may issue an order for immediate compliance and may suspend, modify or revoke the certificate. In addition, Section 22-14-13 of the statute declares that persons found to be in violation of the law, certificate, or department orders are guilty of a misdemeanor, and may be fined and/or imprisoned. Persons willfully obstructing the performance of mandated departmental duties, or willfully resisting department authority, or permitting work to be done without a certificate of approval, shall also be guilty of a misdemeanor and fined and/or imprisoned. 22-14-15 includes civil penalties of \$200 per day, not to exceed \$400.

Emergencies

Procedures for handling dam emergencies are spelled out in Section 22-14-10 of the Dam Control & Safety Act. Responsibilities of the owner include determining that an emergency exists, notifying DEP and any persons who might be in danger if the dam should fail, and taking immediate remedial action. The department, once all notifications have been made, may take its own remedial action if imminent danger exists and there is not sufficient time to order the owner to correct the condition. The Director is authorized to take any of the following actions:

- a. Taking full charge and control of the dam;
- b. Lowering the water level or releasing all water impounded by the dam;
- c. Performing necessary remedial or protective work at the dam site;
- d. Taking any other steps necessary to safeguard life and property.

All remedial work and repairs, whether initiated by the owner or the department, shall be at the expense of the owner. The department may recover such expenses from the owner by civil action if expenses are not repaid by the owner at the department's request.

Section 47-34-15 of the regulations describes the reporting and monitoring requirements in the case of dam emergencies, and the procedures involved in evaluating dangerous conditions.

Liability

Section 22-14-12 of the Dam Control & Safety Act provides that "Nothing in this article shall be construed to relieve the owner of a dam of the legal duties, obligations or liabilities incident to the ownership or operation of a dam."

Oversight

Under the provisions of Section 22-14-7 of the statute, persons who may be adversely affected by the issuance of a certificate of approval for a dam are entitled to a hearing thereon before the director of the department. The director, after hearing the evidence presented may either deny the certificate or issue one with terms, conditions and limitations attached.

Section 22-14-8 requires the department to hold a hearing before any certificate is amended or revoked. Persons adversely affected by such an order shall have the right of appeal to the environmental quality board.

Miscellaneous

1. Sections 22-14-11 describe the requirements for dams completed prior to the effective date of the statute. The DEP is given authority to order draining of reservoir whose dam is judged to be unsafe.
2. Note should be made of the technical detail contained in the regulations concerning requirements for plans, specifications, maps and drawings. Several types of analysis, surveys, and investigations are included as part of the application process. Spillway and stability criteria are precisely described. In addition, minimum performance standards apply to site preparation, construction materials, grading, spillways and appurtenances. Rules governing the operation and maintenance of dams are also included in the regulations.