



SOLUTIONS

Industry Resources by Koontz-Bryant, PC

May 2010

Dams, Lakes and Ponds Summary of Impounding Structure Regulations

To protect the public, the Virginia Dam Safety Act regulates the construction, maintenance and operation of dams. Even though these regulations were passed in 2008, many land owners are not aware of the most recent changes in the rules. A brief summary of the Virginia Soil and Water Conservation Board's regulations is provided below.

The regulations may impose new requirements on a structure upon expiration of a current Regular Operation and Maintenance Certificate. Prior to expiration of current O & M certificates or as of September 26, 2011, all ponds and lakes must be determined to be a regulated impounding structure or an exempt structure, as outlined below. The regulations have imposed significant requirements involving the hydrologic modeling of regulated impoundments as part of the hazard classification process. Application of the new hazard classifications and design requirements may require physical changes to existing structures and trigger application for Alteration Permits. In addition to new design criteria, the regulations address operations and maintenance certifications, construction permits, alteration permits and land title transfers.

Please refer to the actual regulations for official wording related to Impounding Structure. You can view or download the regulations at http://www.dcr.virginia.gov/dam_safety_floodplains/index.shtml .

Regulated Structures

- 25 feet or greater in height with a maximum impounding capacity of 15 acre-feet or greater
- Six feet or greater in height with a maximum impounding capacity of 50 acre-feet or greater
- Not otherwise exempt

Exempt Structures

- Licensed by State Corporation commission
- Owned or licensed by United States Government
- Operated primarily for agricultural purposes and less than 25 feet high **or** agricultural with a maximum impoundment capacity less than 100 acre-feet

Hazard Potential Classification

- High Hazard—failure would result in
Probable loss of life, *or*
Serious economic damage to industrial or commercial facilities, public utilities, major roadways, railroads, personal property, or agricultural interests
- Significant Hazard Potential—failure might result in
Possible loss of life, *or*
Appreciable economic damage to buildings, industrial or commercial facilities, public utilities, secondary roadways, railroads, personal property, or agricultural interests
- Low Hazard Potential—failure would lead to
No expected loss of life, *and*
No more than minimal economic damage.

Modeling Requirements for Hazard Classification

In order to identify the structure's hazard potential, the possible inundation area must be mapped. The study must include:

- Analysis utilizing spillway design flood without dam failure
- Sunny day dam break analysis using volume retained at normal water surface elevation
- Dam break analysis utilizing Spillway Design Flood (SDF)
- Dam break analysis utilizing Probable Maximum Flood (PMF)



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Summary of Impounding Structure Regulations (Continued)

Design and Annual Reporting Requirements

Hazard Potential Class of Dam	Spillway Design Flood (SDF)	Minimum Threshold for Incremental Damage	Operation and Maintenance Certificates	Inspection Reports
High	PMF (Probable Max. Flood)	0.5 PMF	Every 6 yrs.	Every 2 yrs.
Significant	0.5 PMF	100-Yr.	Every 6 yrs.	Every 3 yrs.
Low	100-Yr.	50-Yr.	Every 6 yrs.	Every 6 yrs.

Permits Required

- Construction Permit – all new impounding structures (regulated structures)
- Alteration Permit – any alterations that could affect the structural integrity of an impounding structure

Delayed Effective Dates:

- If currently operating under Regular Operation and Maintenance Certificate and structure was determined to be adequate prior to September 2008, newly required spillway modifications may be addressed at the **later** of O&M Certificate renewal or September 26, 2011.
- Submit application for Operation and Maintenance Certificate 90 days prior to current expiration
- If circumstances warrant more immediate repairs to the structure, the Board may require earlier alterations

Extension of Operation and Maintenance Certificate

The board may extend the Operation and Maintenance Certificate for impounding structures provided the owner submits a written request justifying an extension; the amount of time needed to comply with the requirements set out in the current Operation and Maintenance Certificate; and any required fees. The owner must have demonstrated substantial and continual progress towards meeting the requirements of the certificate in order to receive the extension.

Transfer of Title

- The new owner shall submit a transfer notification to the department
- Amend the current certification and certify to the director awareness of conditions and intent to comply with all requirements and conditions of the permit.

This summary is designed to be an overview of relevant regulations of Virginia's Dam Safety Act. The regulations are complex, and sophisticated engineering analysis may be required. For help with your specific structure, contact Koontz-Bryant, P.C.

Gregory N. Koontz, P.E., L.S., 804-200-1901

Christopher A. Workman, P.E., 804-200-1920