

## MINNESOTA DAM SAFETY LAWS AND REGULATIONS 2007

### Citation

Minnesota's dam safety law is contained in Minnesota Statutes, Chapter 103G.301 to 103G.561. Rules pertaining to Minnesota dam safety program are found in Public Water Resources Rules Parts 6115.0300-6115.0520.

### History

Minnesota's Dam Safety Program was created in 1978 in response to the federal Dam Safety Act. A series of major dam failures killed scores of people in the 1970's and prompted Congress to pass the act to improve dam safety nationally.

Minnesota's dam safety law is contained in Minnesota Statutes, chapter 779 (1978), amended in chapter 105 (1979) and again in chapter 103G (1990). The rules are pursuant to Laws of Minnesota 1978, chapter 779, section 8. A Statement of Need and Reasonableness for the rules was written in late 1978.

Minnesota's program includes enabling legislation, agency rules for construction and operation, creation of a dam database, permitting requirements, regular inspections, repair of state-owned dams, and cost-share grants for dam repairs by local units of government.

The Dam Safety Program regulates the repair, operation, design, construction, and removal of dams. Both privately and publicly owned dams are regulated. The program sets minimum standards for dams regarding safety, design, construction, and operation. These standards are implemented through inspections, permitting, and correcting deficiencies.

### Definitions/Dam Classification

*Dam* means any artificial barrier, together with appurtenant works, which does or may impound water and or waste material containing water. Dams exempt from state jurisdiction include those dams 6 feet high or less, regardless of the quantity of water they impound, and dams that impound 15 acre-feet of water or less, regardless of their height. Dams that are less than 25 feet high and impound less than 50 acre-feet are also exempt from state dam safety rules unless there is a potential for loss of life due to failure or misoperation. Other dams that are exempt include those that are for containment of sewage, federal dams, and flood control dikes and levees.

*Dam height* means the vertical distance from the natural bed of the stream or watercourse measured at the downstream toe of the dam or from the lowest elevation of the outside limit of the dam (if it is not across a stream channel or watercourse) to the maximum storage elevation (MN Rules 6115.0320).

*Maximum storage elevation* means the highest elevation to which water or waste materials can be effectively stored behind the dam on either a temporary or permanent basis, whichever is greater.

**Hazard Classification:**

*Class I* - any loss of life or serious hazard, or damage to health, main highways, high-value industrial or commercial properties, major public utilities, or serious direct or indirect economic loss

*Class II* - possible health hazard or probable loss of high-value property, damage to secondary highways, railroads or other public utilities, or limited direct or indirect economic loss to the public other than that described in Class III

*Class III*- property losses restricted mainly to rural buildings and local county and township roads, which are an essential part of the rural transportation system serving the area involved

*No hazard* - no potential for loss of life and no impacts to health, safety, and welfare.

**Design Criteria**

|                    |          |                    |
|--------------------|----------|--------------------|
| <b>Hydrologic:</b> | Class I  | PMF                |
|                    | Class II | 100 year to PMF    |
|                    | Class II | 50 year to 0.5 PMF |

**Seismic:** 0.025g

**Jurisdiction/Powers of Department**

The law states that the Department of Natural Resources supervises the safety of dams and reservoirs as part of its overall supervision of water conservation. The Commissioner of the Department of Natural Resources sets forth minimum standards and criteria for dam classification and identification of hazards to health, safety, and welfare. The law gives the commissioner the authority to approve or deny permits for dam projects for water and waste impoundment, to promulgate rules, and to inspect any dam as is deemed necessary. The commissioner must be granted access to a dam at any reasonable time to conduct inspections. The commissioner may order additional engineering studies necessary to complete the investigation at the owner's expense and an inspection report shall be filed so the final decision can be made in order to call for repairs or removal.

The law states that the commissioner can impose requirements to ensure that a dam owner is financially capable of maintaining, repairing, or removing the dam if needed. The Minnesota law contains a separate section on powers of the commissioner concerning state-owned or local government unit-owned dams. It gives the commissioner power to construct, maintain, and operate dams necessary to maintain such uniform water levels as may be established under the law. The law facilitates the repair and reconstruction of state-owned dams. It also gives authority to the commissioner to assist local government units in financing the repair or reconstruction of their dams through matching grants. The process whereby the locality can receive the grant is within the law. Additionally, a loan program is established in the law to partially finance the local unit's portion of the repair or reconstruction costs. The commissioner also has the authority to take over a locally owned dam if the locality fails to repair or remove it as ordered by the commissioner.

The Commissioner may take any steps necessary to protect life and property in an emergency.

### **Permit/Approval Process**

The law gives the commissioner authority to issue or deny permits for the construction, operation, alteration, repair, or removal of a dam. The general permit provisions are contained in the law (Statute 103G.301) but the rules describe the permit process in detail. This section includes instructions on application for permits, the preliminary report, filing fees, engineers' requirements, design requirements (although no design standards are listed), plans and specifications, and permit standards. Separate impoundment approval procedures for Class I and II dams are described in the rules.

An application for each new dam, or each dam proposed for enlargement, shall be filed with the commissioner. A certified engineer must complete plans and specs.

The rules allow for repairs to be started in emergency situations without a permit, but the owner shall notify the commissioner at once.

### **Fees**

Each application must contain a non-refundable \$150.00 permit application fee. No federal governmental agency or state agency shall be charged a fee according to the law.

Inspection Fees - Federal, state, and local governments are exempt from paying initial and periodic fees. The rules lay out the fee structure. The initial fee required shall be based on the following formula:

- For the first \$100,000 of estimated costs a rate of 2.50%
- For the next \$400,000, 1.50%
- For the next \$500,000, 1%
- For all costs over \$1,000,000, 0.50%

Other rates are calculated for dams where the final costs exceed the estimate, and where maximum storage level will not be constructed immediately.

Periodic fees shall be charged for each year an inspection is made of \$30 per dam plus an additional fee based on surface area of \$.01 per square foot for the first 1,000 and \$.001 for each square foot in excess of 1,000.

### **Inspection Process**

*State* - The law gives the commissioner the authority to inspect all jurisdictional dams during construction and during regular operation. Additionally, a hazard classification inspection must be completed on all dams. The rules describe what should be included in an inspection. The rules call for a written report of every inspection, including recommended corrective action, submitted to the department and to the owner.

*Owner* - The law states that the owner has responsibility for the maintenance, repair,

and liability of his structure. The rules require the owner to keep inspection schedules and also require owner to submit annual performance reports for certain dams.

### **Frequency of Inspections**

| <i>Hazard Classification</i> | <i>Inspection Cycle</i>         |
|------------------------------|---------------------------------|
| High                         | At least once every year        |
| Significant                  | At least once every four years  |
| Low                          | At least once every eight years |

### **Owner Non-Compliance/Violations/Penalties**

The permittee may be held for claims of violations of any terms or conditions of the permit by the state or any other persons. The commissioner may revoke a permit if the owner is in violation of these laws or the violator could be convicted of a misdemeanor. No fines for violations are mentioned.

### **Emergencies**

The commissioner may take any steps deemed necessary to protect life and property. The rules require owners of Class I dams to file EAPs. The rules list items that need to be included in an EAP.

### **Liability**

Nothing in these rules shall be construed to relieve the dam owner or permittee of the legal duties, obligations or liabilities incident to ownership or operation of the dam. There is nothing in the dam safety legislation about state liability.

### **Oversight**

The rules state that nothing in these rules shall be construed to deprive any owner of such recourse in the courts.

### **Miscellaneous**

1. Citations for small dam design criteria are separate from the regular rules.
2. The law orders the commissioner to report annually to the legislature on state and local dams in need of repair or reconstruction in order of priority.
3. The statutes include language on the approval process for transfers of ownership of dams
4. The dam safety statutes are included in the laws concerning water conservation--there is a strong emphasis on the environment and environmental impacts throughout the law.

### State Citations

|              | <i>Statute</i>  | <i>Regulations</i>                                       |
|--------------|---|--|
| Original     | Minnesota Statutes, chapter 779 (1978)                              | Statement of Need and Reasonableness (1978)              |
| Last Amended | Laws of 1995, chapter 218, section 17 (103G.515, Subd. 5 was added) | June 11, 2001 (the frequency of inspections was reduced) |

### State Web Site

[http://www.dnr.state.mn.us/waters/surfacewater\\_section/damsafety/index.html](http://www.dnr.state.mn.us/waters/surfacewater_section/damsafety/index.html)