

Dams and Dam Safety in Minnesota



State Dam Safety Statutes and Rules

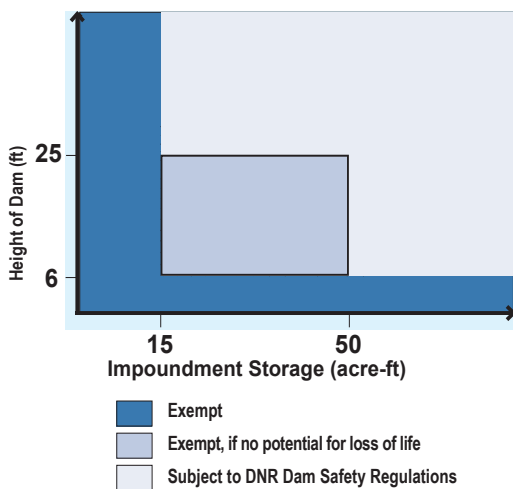
Minnesota Statutes, Section 103G.515 authorize the DNR to inspect dams and issue orders for necessary repairs. Rules governing Minnesota's Dam Safety Program are parts 6115.0300-6115.0520.

State Dam Safety rules do not apply* to dams that are so low (six feet high or less) or retain so little water (15-acre feet or less) that they don't pose a threat to public safety or property. Some larger dams may also be exempt if there is no potential for loss of life due to failure or improper operation.

* *Public Water Rules may still apply*

Dams Subject to DNR Dam Safety Regulations

Federally-owned dams and non-hazard dams are exempt



Dam Safety Grants

Information on grants to local government units to improve the safety and condition of publicly-owned dams is available at www.mndnr.gov/dams or by requesting a grant application from the State Dam Safety Engineer, (651) 259-5715.

Dam Safety Permit Guidelines

See online brochure at www.mndnr.gov/dams, or request a copy from the State Dam Safety Engineer, (651) 259-5715.

Dams are an important part of the infrastructure of Minnesota. They maintain lake levels and impound water for flood control, power production and water supply. Dams are also an important consideration in assessing the health of Minnesota's watersheds.



Lanesboro Dam in Fillmore Co.

Investing in Dams

There are more than 1,250 dams in Minnesota; 800 are public dams, and the state owns 430 of the public dams. Most of the public dams are more than 50 years old and require ongoing or emergency repairs and reconstruction to maintain their structural integrity. Through state bonding, the DNR spends approximately \$1 million annually on repairs and reconstruction. An estimated \$114 million is needed over the next 20 years to assure public dams remain in a safe and usable condition.

Dams fail due to unusually large floods, inadequate design, improper operation, and a lack of maintenance. When they fail, there can be a quick release of water causing rapid and unexpected flooding downstream, significant property damage and the possibility of loss of life.

Dam Safety Program

Minnesota's State Dam Safety program was created in 1978 in response to the National Dam Safety Program Act and a series of major dam failures nationwide that killed scores of people in the 1970s.

The purpose of the program is to protect the life and safety of people in Minnesota by ensuring that dams are safe. Minnesota's program sets minimum standards for dams and regulates the design, construction, operation, repair and removal of dams. Both privately and publicly-owned dams are regulated.

Dam Safety staff monitor, analyze, and help develop and maintain the state's dam infrastructure to protect the safety of the people of Minnesota while working to minimize impacts on ecosystems.

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Dam Owners and Dam Finder

The DNR Division of Ecological and Water Resources maintains data on Minnesota dams that are included in the National Inventory of Dams (NID) database. This includes the dam name, location, owner, purpose, hazard classification, structural condition, and about 50 other data elements. Over 1,250 Minnesota dams are currently listed in the inventory. Information on Minnesota dams can be found at www.mndnr.gov/dams.

The Dam Safety Program keeps a file on all dams that are subject to state dam safety regulations or have had information or reports generated on them for another purpose. A typical file contains construction plans, photos, inspection reports, and correspondence.

Inspections

All state-regulated high hazard dams are inspected annually by DNR Dam Safety engineers while lower hazard dams are inspected less frequently. Some inspections are also performed by professional engineers working for the U.S. Army Corps of Engineers, the Natural Resources Conservation Service, the Federal Energy Regulatory Commission, local units of government, and private dam owners. Some dams have instrumentation to warn of internal changes that may indicate a deterioration of their structural integrity.

High hazard dams have Emergency Action Plans which need to be reviewed and revised as necessary on a periodic basis. See www.mndnr.gov/dams for more information on these plans.



Dam engineer inspecting dam

Permits

Permits are required to build a new dam; alter, repair, or remove an existing dam; modify dam operations; perform major maintenance; or transfer dam ownership. Plans for construction must be completed by a professional engineer experienced in dam engineering. See www.mndnr.gov/dams for Permit Guidelines for Dams or call the State Dam Safety Engineer, (651) 259-5715. Application and inspection fees may apply.

Grants for Repair, Removal and Reconstruction

Minnesota Statutes, Section 103G.511 authorize a state dam safety grant program. Grants to local units of government may be made for dam repair, reconstruction, or removal of publicly-owned dams. Funds used for these grants come from state bonding appropriations through legislative action. By June 1st of each odd-numbered year, the DNR submits a priority list of dams in need of repair, reconstruction, or removal to the legislature. See www.mndnr.gov/dams for Dam Safety Grants or call the State Dam Safety Engineer at (651) 259-5715.

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Some older dams no longer provide sufficient benefits to compensate for their public safety hazards, environmental damages, or costs of maintenance and repairs. In these cases, the state may provide up to 100% grants for removal.

Among the initiatives of the Ecological and Water Resources Division is stream restoration. Removal or modification of dams and restoration of stream function and stability are designed to eliminate safety hazards and improve property values, fish and wildlife habitat, water quality, water availability and recreational value.



New London Dam reconstruction in Kandiyohi Co.

Dam Owner Responsibility and Liability

Dam owners must properly maintain, repair, and operate their dams. They may also be required to make improvements to meet current dam safety criteria. If development downstream raises the hazard classification of the dam, the owner may be required to bring the dam into compliance with the higher standards required under the new classification. The owner of the dam could be found liable for damages incurred from dam failure or improper operation, particularly if the dam is not compliant with state standards. The DNR repairs and maintains all state-owned dams.



Aftermath of the Shady Lake Dam break near Oronoco in Olmsted County

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Construction and operation of a dam can have varied impacts to surrounding lands and the environment. Losses suffered by other parties can become liabilities to a dam owner. Impacts could include:

- altered ground water levels that affect wells or crops
- increased flooding caused by improper operation
- injuries to anglers, boaters or swimmers because of hazardous conditions at the dam
- environmental damages including degraded water quality, alteration of sediment transport, increased erosion, loss of aquatic habitat, and altered stream biology.



Lake Bronson Dam in Kittson Co.

DNR Contact Information



DNR Ecological and Water Resources lists area office staff at www.mndnr.gov/waters and dam safety staff at www.mndnr.gov/dams

DNR Ecological and Water Resources
500 Lafayette Road, Box 32, St. Paul, MN
55155-4032, (651) 259-5700 or 5100

DNR Ecological and Water Resources website provides information about dam safety permits and grants at www.mndnr.gov/dams or by calling (651) 259-5715.

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DNR Information Center

Twin Cities: (651) 296-6157
Minnesota toll free: 1-888-646-6367
Telecommunication device for the deaf (TDD): (651) 296-5484
TDD toll free: 1-800-657-3929

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This information is available in an alternative format on request.