

STATE OF MINNESOTA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF WATERS

IN THE MATTER OF PROPOSED ADOPTION OF
DAM SAFETY RULE AMENDMENTS

Minnesota Rules, part 6115.0360

STATEMENT OF NEED AND REASONABLENESS

I. Introduction

A. Purpose

The primary purpose of the dam safety rules is to regulate the construction and enlargement of dams, as well as the repair, alteration, maintenance, operation, transfer of ownership, and abandonment in such a manner as to best provide for public health, safety, and welfare. The proposed amendments to the existing rules solely affect the provisions governing frequency of periodic inspections performed by the state.

B. Notification to Persons and Classes of Persons Affected by the Proposed Rules

Amendments

A request for comments was published in the State Register on October 19, 1998. This notice described the proposed rule amendments, the statutory authority for the rules, and the parties that could be affected by the proposed rule amendments. The department also provided additional notice to people who may have an interest in the proposed rule amendments by sending the request for comments to fifty-four organizations and individuals representing public and private dam owners, local governments, regional governments, and federal resource agencies.

Organizations contacted included: Inland Steel Mining Company, National Steel Pellet Company, Hibbing Taconite Company, Eveleth Mines, United States Steel Corporation, LTV Steel Mining Company, Great Northern Iron Ore Properties, Minnesota Power Company, Otter Tail Power Company, Northern States Power Company, Potlatch Corporation, Champion International Corporation, St. Cloud Public Utilities, Minnesota Association of Watershed Districts, League of Minnesota Cities, Association of Minnesota Counties, Minnesota

Association of Soil and Water Conservation Districts, Red River Watershed Management Board, Redwood-Cottonwood Rivers Control Board, Area II Minnesota River Basin Projects, Inc., Natural Resources Conservation Service, and the U.S. Army Corps of Engineers.

Two organizations submitted comments on the proposed rule amendments. The Area II Minnesota River Basin Projects, Inc. expressed concern about reducing the frequency of dam inspections, citing the need for regular inspection and maintenance to protect the dam structure itself and to safeguard the surrounding community. The Engineering Division of the U.S. Army Corps of Engineers stated support for inspecting medium hazard dams once every five years; expressed concern that the proposed inspection schedule of once every ten years for low hazard dams may be too infrequent to properly identify developing safety problems; and stated that annual inspection of high hazard dams may be excessive. That part of the existing rule pertaining to inspection of high hazard dams is not proposed to be amended.

C. Changes in Planned Rule Amendments Based on Comments Received

Based on the input received in response to the request for comments, the following changes were made in the planned rule amendments:

- 1) the proposed rule amendment for frequency of inspection of medium hazard dams is at least once every 4 years instead of the planned 5 years; and
- 2) the proposed rule amendment for frequency of inspection of low hazard dams is at least once every 8 years instead of the planned 10 years.

D. Statutory Authority

Statutory authority for the proposed rules is provided in Minnesota Statutes, section 103G.515.

II. Regulatory Analysis

A. Description of the Classes of Persons Affected by the Proposed Rules

The rules amendments may affect dam owners of low and medium hazard dams. However, as the amendments are solely intended to make the rule consistent with long-standing state dam safety program practices, there should be no actual impact from the rule amendments. Certain groups representing public and private dam owners, local governments, regional governments and federal resource agencies were included in the department's additional notice plan.

B. Probable Costs to the Agency or other Agencies from the Proposed Rules

The proposed rule amendments will not result in costs to the department or other agencies or local units of government. No changes are planned in the existing state dam safety program. The proposed rule amendments are not anticipated to have any effects on state revenues.

C. Determination of Less Costly or Less Intrusive Methods for Achieving the Purpose of the Proposed Rules

The proposed rule amendment relaxes unnecessarily rigid standards in the existing rule. The proposed rule amendment does not increase costs nor is the proposed rule more intrusive than the existing rule.

D. Description of Alternative Methods for Achieving the Purpose of the Proposed Rule

The two main alternatives are to 1) do nothing, or 2) hire more dam safety engineers to support the dam inspection frequencies called for in the existing rule.

Although the dam inspection provision in the existing rule begins with the phrase "[s]ubject to the availability of staff and funds," it is still important for government agencies to

meet performance criteria set forth in law and rule. Failure to do so can damage an agency's credibility. For this reason the "do nothing" alternative is not acceptable.

The department is directed to adopt rules governing dam inspection fees by Minnesota Statutes, section 103G.515, subdivision 4 to offset the department's expenses incurred in inspecting dams. The department could have chosen to propose an increase in the inspection fees adequate to cover actual costs of inspecting medium and low hazard dams as frequently as called for in the existing rule, and then seek an increase in its base biennial budget to hire additional inspectors. A problem with this approach is that the statute exempts political subdivisions from dam inspection fees so the entire financial burden would fall on private dam owners, even though the majority of medium and low hazard dams are publicly-owned. Therefore, this alternative would also require amending the statute to eliminate the fee exemption for political subdivisions. This alternative was rejected primarily because the department has found that medium and low hazard dams do not need to be inspected as frequently as called for in the existing rule.

E. Probable Costs of Complying with the Proposed Rules

The proposed rule amendments do not create new costs.

F. Assessment of Differences between the Proposed Rules and Existing Federal Regulations

The proposed rule amendments apply to dams that are not subject to federal dam safety regulations.

G. Regulatory, Licensure, or Other Charges in the Proposed Rules

The proposed rule amendments do not involve any regulatory, permit, or license fees or any other charges to the public.

H. Proposed Rules Effect on Farming Operations

The proposed rule amendments will not affect farming operations.

I. Performance Based Analysis under Minnesota Statutes, section 14.002

Minnesota Statutes, section 14.002 requires that agencies, whenever feasible, must strive to develop rules and regulatory programs to meet the agency's regulatory objectives with maximum flexibility for the regulated party. In this instance, the department rules apply to the department's inspection program which is performed by department staff. The proposed rule amendments will not reduce the agency's costs because the changes are sought to reflect the agency's actual frequency of dam inspections. If the agency were to increase the frequency of inspection to what the rule as unamended states, the agency's costs would in fact increase. The rule amendments as proposed, therefore meet the regulatory objectives of the agency and the adoption of the amendments will give the agency flexibility in meeting the requirements of the rule by recognizing that the inspection schedule does not need to be as frequent as it currently is in rule with the caveat that the agency can, if necessary, conduct more frequent inspections than are called for in the rule amendments.

III. Need and Reasonableness of Specific Rule Amendments

A. Background

Minnesota's dam safety program was created by statute in 1978 in response to the federal Dam Safety Act. Several major dam failures in the 1970s prompted Congress to pass the Act to improve state dam safety programs. The Act provided states the opportunity to apply for federal cost-share grants to do comprehensive dam inspections, evaluations, and classifications. The department used the federal grants to hire the Corps of Engineers and private consulting engineering firms to inspect, evaluate, and classify about sixty of the largest dams in Minnesota.

Department staff completed about twenty additional comprehensive dam investigations.

Since then, there have been very few failures of low and medium hazard dams. Where failures have occurred, the breaches have not resulted in any injuries or significant property damage. The failures were mainly due to dam overtopping caused by extreme rainfall events, which could not have been prevented by more frequent dam inspections.

The department classifies dams as high hazard (Class I), medium hazard (Class II), or low hazard (Class III). Dams considered “no hazard” are not given a numerical classification and are not subject to state dam safety regulation. Any dam whose failure would probably result in loss of life, or create a serious health hazard, is classified as high hazard. The high hazard classification is also assigned to dams whose failure would probably damage main highways, major public utilities, or high-value industrial or commercial properties, or cause serious economic losses. Medium hazard is assigned to dams whose failure might create a health hazard, or would probably damage secondary highways or railroads, or cause limited economic losses. Low hazard is used for dams whose failure would probably result in losses restricted mainly to rural buildings and local county and township roads. Minnesota currently has about 40 high hazard dams, 120 medium hazard dams, and 800 low hazard dams that are subject to state dam safety rules.

Common dam maintenance and safety problems found in inspections include poorly maintained earthen embankments; loss of riprap erosion protection; deterioration of spillway conduits, and other structural components and obstruction of gates or spillways.

B. Description of Proposed Rule Amendments

Subpart 3(b) of Minnesota Rules, part 6115.0360 currently calls for periodic state

inspection of medium hazard dams at least once every 2 years, and low hazard dams at least once every 4 years “[s]ubject to the availability of staff and funds” after the initial detailed inspections. The proposed amendment changes the routine state inspection frequency for medium hazard dams to 4 years and low hazard dams to 8 years.

C. Need

The rule change is needed to make the rule consistent with actual state dam safety program priorities. The department maintains two full-time licensed engineers to carry out dam safety program responsibilities. High hazard dams are the top priority for periodic inspection, and the department ensures that they are inspected every year. Inspection of medium and low hazard dams has a lower priority, and many of these dams are not being routinely inspected by state dam safety engineers as frequently as called for under the existing rule. In addition to conducting dam inspections, the two dam safety engineers are also responsible for administering state dam safety grants to local governments; managing state dam safety repair, reconstruction, and removal projects funded by the legislature; and responding to applications for dam safety permits for dam construction and modification. These related dam safety program responsibilities are generally of higher priority than conducting routine periodic inspections of medium and low hazard dams.

It is not practical nor an efficient utilization of resources for the department to provide routine periodic inspection of the approximately 920 medium and low hazard dams in Minnesota at the frequencies called for in the existing rule, nor is such an inspection schedule necessary to protect public safety. The inspection frequencies in the existing rule for medium and low hazard dams are not necessary and need to be adjusted to reflect a more practical schedule of dam inspections.

D. Reasonableness

A 4-year routine state inspection schedule for medium hazard dams is reasonable because these dams do not pose a critical public safety or economic risk. Periodic state inspection on a 4-year interval is adequate to ensure that necessary maintenance and repair work is performed on medium hazard dams. An 8-year routine state inspection schedule for low hazard dams is reasonable because these dams pose minimal public safety and economic risks.

Furthermore, dam inspections can be performed whenever they are determined to be needed regardless of the frequencies defined by state rule or the hazard class of the dam. Inspections are typically conducted more often when major repairs are being planned and implemented or when a potential problem with a dam needs to be monitored. Another factor driving dam safety inspection priorities is the number of requests for inspections from dam owners who become aware of a potential problem. Dam owners, local government staff, department field staff, and the general public can report anything unusual observed at a dam. The department has authority under Minnesota Statute, section 103G.515, subdivision 2, to direct a dam owner to have needed engineering investigations made at the owner's expense. This authority can be used when the department is unable to provide the service to the dam owner. Also in some cases the owner will prefer to have their own engineering consultant perform inspections. Department records reflect that inspection on about 25% of medium hazard dams are actually being done annually by the dam owner. These owners are power companies, the Army Corps of Engineers, and mining companies. These inspections supplement department inspections.

Further, the proposed rule amendments are reasonable when compared to the Corps of

Engineers dam inspection policy, and the dam safety programs of other states. The Corps of Engineers thoroughly inspects all of its dams, regardless of hazard class, once every five years with a more frequent schedule allowed for new dams. This is less frequent than the current state rules dictate for low and medium hazard dams even though the Corps owns some of the largest dams in Minnesota, including eleven high hazard dams. These federally-owned dams are not subject to the department's dam safety rules.

Most states do not define in law or rule an inspection schedule for medium and low hazard dams, giving discretion to the responsible state agency to decide when inspections are necessary. In 1991 the Association of State Dam Safety Officials, of which the department is a member, inventoried dam safety laws and regulations in all 50 states. They found that in 36 states there was nothing in law or rule specifying a particular inspection schedule for medium or low hazard dams. Dam safety inspection programs among the states varied as follows:

2 states - no dam inspection requirements in state law or rule;

11 states - dam owners responsible for inspections, state may provide guidance;

13 states - state responsible for inspections, frequency at state discretion;

10 states - state responsible for inspections, frequency defined only for high hazard dams;

14 states - state responsible for inspections, frequency defined for all dams.

ADDITIONAL NOTICE

As identified above, the agency mailed the request for comments on the subject matter of the rules to entities other than those on the department's list of persons to receive notice of department rulemaking. Organizations contacted included: Inland Steel Mining Company, National Steel Pellet Company, Hibbing Taconite Company, Eveleth Mines, United States Steel

Corporation, LTV Steel Mining Company, Great Northern Iron Ore Properties, Minnesota Power Company, Otter Tail Power Company, Northern States Power Company, Potlatch Corporation, Champion International Corporation, St. Cloud Public Utilities, Minnesota Association of Watershed Districts, League of Minnesota Cities, Association of Minnesota Counties, Minnesota Association of Soil and Water Conservation Districts, Red River Watershed Management Board, Redwood-Cottonwood Rivers Control Board, Area II Minnesota River Basin Projects, Inc., Natural Resources Conservation Service, and the U.S. Army Corps of Engineers.

WITNESSES

If the matter goes to hearing, the following individual(s) are expected to testify of behalf of the department:

Mel Sinn, Administrator, Surface Water & Hydrographics Section

and other DNR staff as may be necessary

Department of Natural Resources, Division of Waters

Box 32, 500 Lafayette Road

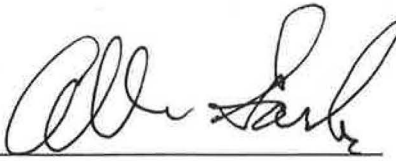
St. Paul, Minnesota 55155-5032

CONCLUSION

Government resources at all levels are limited, so agencies must prioritize their work. Frequent dam safety inspections are critical where loss of life would probably result from a dam failure, and the department ensures that all high hazard dams are inspected each year. Routine state inspections of medium hazard dams at least every four years, and low hazard dams at least every eight years, when coupled with dam owner inspections and informal observations by dam

owners and the public, is adequate inspection to protect to the public interest and welfare. The proposed rule changes to Minnesota Rules, part 6115.0360 are therefore necessary and reasonable.

Dated: 1/16/01

By 

Allen Garber, Commissioner

Department of Natural Resources

