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BILL ANALYSIS

Senate Fiscal Agency

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Senate Bill 242 (Substitute S-1 as reported)
 Senate Bill 243 (as reported without amendment)
 Sponsor: Senator Vern Ehlers
 Committee: Natural Resources and Environmental Affairs

Date Completed: 4-3-89

RATIONALE

Public Act 184 of 1963 regulates the construction of dams in Michigan, but many people believe that it is inadequate to protect the health and safety of individuals, the structural integrity of dams, and the preservation of natural resources. They argue that, since Public Act 184 regulates only the construction and reconstruction of dams (and not their repair, maintenance, and operation), does not require specific inspection schedules, and does not adequately protect natural resources, it should be replaced with a comprehensive new statute to regulate dam construction, repair, alteration, removal and operation as well as to provide sufficient regulatory oversight of the operation of dams by requiring inspections, providing measures to protect natural resources, and specifying violations and penalties and financial remedies for damages due to violations.

- Specify minimum criteria for determining spillway capacity (i.e., the maximum rate of discharge that will pass through a waterway in or about a dam for the discharge of water).
- Require a completion notice for structural work done on a dam and provide for various inspections.
- Provide for limited operation orders and removal orders.
- Authorize the issuance of emergency orders and compliance orders, and the filing of civil actions.
- Specify violations and penalties.
- Make other provisions regarding notice of potential hazards; grievance hearings; promulgation of rules; liability and legal remedies; and compliance with other Acts.

CONTENT

Senate Bill 242 (S-1) would create the "Dam Safety Act" to do all of the following:

- Grant to the Department of Natural Resources (DNR) jurisdiction over all dams and impoundments (i.e., water held back by dams) in the State.
- Provide for the application for and issuance of dam permits and the assessment of fees.

The bill would repeal Public Act 184 of 1963 (MCL 281.131-281.135), which regulates the construction, operation, and inspection of dams.

The bill would take effect on January 1, 1990.

Senate Bill 243 would amend Public Act 156 of 1851, which defines the powers and duties of county boards of commissioners, to remove a county board's authority to permit or prohibit the construction of a dam. (The county board of commissioners would continue to

S.B. 242 & 243 (4-3-89)

have such authority over the construction of a bridge.) The bill also would repeal a section of the Act that requires the county board's approval before the construction of a dam begins. Senate Bill 243 is tie-barred to Senate Bill 242.

MCL 46.21

A detailed description of Senate Bill 242 (S-1) follows.

DNR Jurisdiction

The bill specifies that dams and impoundments in the State would be under the jurisdiction of the DNR. Projects that had preliminary permits, were licensed, or for which an application for licensure was filed, under the Federal Power Act would be exempt from the bill if Federal dam safety inspection provisions applied and inspection reports were supplied to the DNR. Projects located on boundary waters under the jurisdiction of the Army Corps of Engineers also would be exempt from the proposed Act, as would impoundments licensed under the Solid Waste Management Act that contained or were designed to contain "type III wastes" as defined in rules promulgated under that Act.

Under the bill, a person could not construct, enlarge, repair, reconstruct, alter, remove, or abandon a dam except as provided in the bill. This restriction would not apply to maintenance performed on a dam that did not affect the structural integrity of the dam. The DNR would have to employ professional, technical, and clerical assistants necessary to carry out the proposed Act. The preparation of plans and specifications, with the exception of minor projects, would have to be done by licensed professional engineers. For three years beginning December 28, 1988, a permit would not be required for the repair, reconstruction, or improvement of a dam in the Village of Luther and/or a dam in Everett Township. (Those projects were made exempt from permit requirements by Public Acts 484 and 485 of 1988.)

Dam Permits and Fees

The bill would prohibit the following activities without a valid permit issued by the DNR:

- Construction, reconstruction, or repair of a dam.
- Enlargement of a dam or impoundment or alteration of a dam.
- Removal or abandonment of a dam.

An application for a permit to perform any of the above activities would have to be made to the DNR and include information that the DNR considered necessary. One application would be sufficient for a project that included activities at multiple locations. An application for a permit to construct a new dam or reconstruct a failed dam or enlarge a dam with a height of six feet to 10 feet would require a fee of \$250; for a dam with a height of 10 feet or more but less than 20 feet, a fee of \$500 would be required; and for a dam over 20 feet high, a \$1,000 fee would be required. An application for a permit to repair, alter, remove, or abandon a dam would require a fee of \$25, which would be waived if a similar application fee under the Inland Lakes and Streams Act or the Wetland Protection Act were required. The DNR would have to waive all fees for applications from Federal or State agencies, local units of government, and DNR-sponsored projects located on public lands.

Anyone who desired notification of pending applications could make a written request to the DNR accompanied by an annual fee of \$25, which would be credited to the General Fund. The DNR would have to prepare a biweekly list of the applications and mail the list to those who requested it and paid the fee, for the remainder of the year. The list would have to include the name and address of each applicant, a legal description of the lands to be included in the applicant's project, and a summary statement of the project's purpose.

The DNR would have to give copies of an application to the local unit where the project would be located, the adjacent riparian owners, a Watershed Council organized under the Local River Management Act and other persons whom the DNR considered appropriate or who requested copies. The copies would have to be accompanied by a statement that the DNR could act on the application without a public hearing unless a written request were filed within 20 days. The DNR could hold a hearing upon a written request of the applicant, a riparian owner, or a person or governmental

unit entitled to receive a copy of an application. Such a hearing would have to be held in compliance with the Open Meetings Act. The DNR would have to mail copies of the meeting notice to persons who requested the biweekly application list, the person requesting the hearing, and the persons and governmental units entitled to receive copies of permit applications.

The DNR could grant or deny a permit within 60 days after submission of an application or, if a public hearing were held, within 120 days after submission. The DNR would have to supply a written statement of reasons for denial of a permit, and, if a minor modification of the application would result in approval, would have to notify the applicant of the nature of the modification. If immediate action were necessary to protect the structural integrity of a dam, the DNR could issue a permit before the standard 20-day period. If imminent danger of failure existed, an owner of a dam could take action necessary to avoid or limit emergency conditions. The DNR could not issue a permit under the bill if it determined that the proposed activity would have "a significant adverse effect on public health, safety, welfare, property, or natural resources or the public trust in those natural resources".

The DNR would have to promulgate rules to establish minor project categories for dam alterations and repairs that would have minimal effect on a dam's structural integrity. The DNR could act on such an application and grant a permit after an on-site inspection without providing public notice. A final inspection by the DNR or certification of the project by a licensed professional engineer would not be required for such a project.

Permits issued under the proposed Act would have to require that the plans and specifications be approved before construction could begin. Permitted activities would have to be completed with a specified time not to exceed two years. The DNR, upon written application and for good cause shown, could extend that deadline. Notice of commencement of the project would have to be given to the DNR at least 10 days before construction began. Plans and specifications could not be changed without prior DNR approval. Permits

could be renewed by the DNR and could specify the terms and conditions of the permit, which would be effective for the life of the project.

A construction or reconstruction permit could require a performance bond to assure completion of the project or to provide for complete or partial restoration of the project site. A permit also could require that a dam owner establish an escrow account or performance bond that would provide sufficient funds to remove the dam and to remove or stabilize sediments accumulated in the impoundment after the dam outlived its use. The DNR would have to promulgate rules relative to the escrow account and performance bond requirements. (A dam regulated under Public Act 92 of 1970, which governs the reclamation of mining lands, would be exempt from this requirement.)

Permits could be suspended, revoked, annulled, withdrawn, recalled, canceled, or amended after a hearing for violation of any of the permit's provisions, violation of the bill or a rule promulgated under it, or any misrepresentation in the application. Such hearings would have to be conducted by the DNR in accordance with the Administrative Procedures Act.

Spillways

The bill would require that "freeboard" be considered when determining spillway capacity. ("Freeboard" would mean "the vertical distance between the design flood elevation and the lowest point of the top of the dam".) Spillway capacity would have to meet the following minimum criteria:

- Low hazard potential dams would have to be capable of passing the 100-year flood, or the flood of record, whichever was greater.
- Significant hazard potential dams would have to be capable of passing the 200-year flood, or the flood of record, whichever was greater.
- High hazard potential dams, less than 40 feet in height, as measured from the 200-year design flood elevation to the lowest downstream toe elevation, would have to be capable of passing the 200-year frequency flood, or the flood of record, whichever was greater.

- High hazard potential dams, 40 feet or greater in height, as measured from the 200-year design flood elevation to the lowest downstream toe elevation, would have to be capable of passing the "half probable maximum flood". (This criterion could be reduced to no less than the 200-year frequency flood, with proper documentation showing that a dam failure under "half probable maximum flood conditions" would not cause additional damage or loss of life.)
- Spillway design capacity could not be less than the flood of record.

If a dam could not pass the design flood, an auxiliary spillway would have to be provided. The owner would have to document, to the DNR's satisfaction, that the dam had sufficient spillway capacity and that there were proper means to operate the spillway(s) during the design flood.

Completion Notice and Inspections

With the exception of minor projects, an owner would have to give a notice of completion to the DNR within 10 days after the completion of a new, reconstructed, enlarged, repaired, or altered dam. Within 20 days after the filing of the notice, the owner would have to file with the DNR a statement signed by a licensed professional engineer certifying that the project was done in conformance with approved plans and specifications. The DNR would have to inspect the project and provide written notice of final approval to the dam owner. If the project were determined not to be completed in accordance with approved plans and specification and permit conditions, the DNR could take enforcement action.

An owner would have to submit inspection reports that were prepared by a licensed professional engineer and evaluated the dam's condition. For high hazard potential dams, such reports would have to be submitted at least once every three years; for significant hazard dams, at least once every four years; and for low hazard dams, not less than once every five years. The DNR would have to determine the hazard classification potential of all dams and establish an inspection schedule that would stagger the reporting years for each classification. The DNR also would have to

notify owners when inspection reports were due and could order additional inspection reports following an event or change in condition that threatened a dam. Inspection reports would have to include an evaluation of the dam's condition, spillway capacity, and operational adequacy. A report also would have to include an evaluation of whether the dam constituted a danger to public health, safety, welfare, property, or natural resources. The inspection report would have to include recommendations for maintenance, repair, and alterations of a dam to ensure its safety.

A local unit of government could request that the DNR conduct a visual inspection of a dam that the local unit owned and prepare a report on the condition of the dam, rather than engaging a licensed professional engineer to prepare the inspection report.

If an inspection report revealed a need for further investigation or evaluation of certain features in order to assess the condition of the dam and its impact on natural resources due to misoperation or failure, the DNR could order the completion and submission of such a detailed investigation or evaluation, which would have to be completed at the owner's expense. If an owner failed to submit any required inspection report, the DNR could cause such a report to be prepared and recover the costs of the report in court.

The bill would allow the DNR to make or cause to be made a hydrologic or other investigation and study to facilitate a decision regarding the structural integrity and operation of a dam.

If the DNR found that an existing condition endangered a dam, it would have to order the owner to take actions to alleviate the danger and protect public health, safety, welfare, property, or natural resources or the public trust in those natural resources.

The DNR Director, or an authorized representative, would have the right to enter in or upon any private or public property any time where the public safety could be in danger, at reasonable times and with proper identification, for the purpose of inspecting or investigating conditions relating to the construction, operation, or safety of a dam and to determine compliance with the terms, conditions, and

requirements of permits, order, or notices issued under the proposed Act or a rule promulgated under it.

Limited Operation and Removal Orders

The DNR could order a dam owner to limit dam operations in order to protect public health, safety, welfare, property, and natural resources or public trust in those resources. Such an order could include cold water releases, minimum flow releases, impoundment fluctuation restrictions, or requirements for run-of-the-river operation. In issuing limited operation orders, the DNR would have to consider social, economic, and public trust values.

Where significant adverse environmental impact or damage to persons or property, or both, had occurred as a result of the operation, condition, or existence of a dam, the DNR could order the removal of the dam following a determination that the dam was likely to continue to cause the significant adverse effects or damage. In issuing a removal order, the DNR would have to consider social, economic, and public trust values. The DNR could not issue a removal order pertaining to a dam under the authority of the Public Service Commission or the Federal Energy Regulatory Commission, unless the Commission concurred with the order in writing.

The DNR would have to provide a dam owner with an opportunity for a hearing before finalizing either a limited operation or removal order.

Emergency Orders, Compliance Orders, and Civil Actions

Emergency Orders. The DNR Director could order an owner, by written notice, immediately to repair, drawdown, breach, or cease operation of a dam where the dam was in imminent danger of failure and was causing or threatening to cause harm to public health, safety, welfare, property, or the natural resources or public trust in those resources. If the owner failed to comply with an order, or were unavailable or unable to be contacted, the DNR could undertake immediate action as necessary to alleviate the danger. If the DNR did so, it could recover incurred costs from the

dam owner in court. The emergency order could be terminated upon a determination in writing by the Director that all necessary emergency actions were complied with and that the emergency no longer existed.

When ordering emergency actions, the DNR could specify maximum drawdown level and discharge rates and require sediment surveys, water quality sampling, monitoring, or other actions to insure adequate protection. The DNR could alter or modify the requirements of an emergency order if, during the conduct of ordered actions, the alteration or modification were determined necessary to protect the public health, safety, welfare, property, or natural resources or the public trust in those natural resources. If the DNR issued an emergency order, it would have to give the owner an opportunity for a hearing within 15 days of the date of issuance. At the hearing, the DNR would have to determine if the emergency order should be continued, modified, or suspended.

An owner of a dam would have to prepare, and keep current, emergency action plans for all dams that he or she owned. Emergency action plans would have to be in a form prescribed and approved by the Department. An emergency plan would have to be consistent with the affected county or local emergency operations plan and the Michigan Emergency Preparedness Plan. Prior to DNR approval of an emergency action plan, the plan would have to be approved by the applicable county or local emergency management coordinators for consistency with the county or local emergency operations plan.

Compliance Orders and Civil Actions. If the DNR determined that a person was in violation of the bill, a rule promulgated under it, or a condition of a permit, the DNR could issue an order requiring the person to comply with the conditions or to restore the site affected by the violation to its original condition. Restoration could include, but would not be limited to, removal of fill material deposited, or replacement of soil, sand, or minerals. Such an order would have to state the nature of a violation and the required remedial action, and specify a reasonable time for compliance considering the seriousness of the violation and the nature of any public threat that could be

involved.

If the DNR determined that a person violated the proposed Act, a rule promulgated under it, an order issued by the DNR Director or a permit, the Department could suspend, modify, or revoke a permit after giving notice and opportunity for a hearing. The bill's remedies would be cumulative and would not prevent the DNR from imposing other penalties. In addition, the DNR could bring a civil suit in response to a violation.

The Attorney General could bring a civil action for appropriate relief upon request of the DNR. Such an action could be brought in the Circuit Court for Ingham County or the county in which the dam was located. The Court could issue injunctive relief and require compliance with the proposed Act. In addition to any other relief, the Court could impose a civil fine of up to \$10,000 for each day of violation. A person found guilty of contempt for violating a court order would be subject to an additional civil fine up to \$10,000 for each day of violation.

Violations and Penalties

A willful or reckless violation of the bill, a rule promulgated under it, an order issued by the Director or a condition of a permit, that placed a person in imminent danger of death or serious bodily injury, or that could cause serious damage to property or natural resources, would be a misdemeanor, punishable by imprisonment for not more than one year or a fine of not less than \$2,500 nor more than \$25,000 for each day of the violation, or both. A person who committed a second such offense would be guilty of a felony, punishable by imprisonment for not more than two years or a minimum fine of \$10,000 for each day of violation, or both.

In addition, the court could order a person who violated this proposed Act, a rule promulgated under it, or a permit issued under it to restore the site affected by the violation to its original condition. Restoration could include, but would not be limited to, removal of fill material deposited or replacement of soil, sand, or minerals.

Other Provisions

Notice of Potential Hazards. A dam owner, or his or her agent, would have to advise the DNR and affected off-site public authorities and safety agencies of "any sudden or unprecedented flood or unusual or alarming circumstances or occurrence existing or anticipated" that could affect the dam's safety, within 24 hours of the occurrence. The owner also would have to notify the DNR of any necessary emergency drawdowns, repairs, breaching, or other action taken in response to an emergency.

Grievance Hearings. Any person aggrieved by an action or inaction of the DNR could request a hearing on the matter involved. Such a hearing would have to be conducted by the DNR according to the Administrative Procedures Act. A determination of action or inaction by the DNR following such a hearing could be subject to judicial review.

Promulgation of Rules. The bill would authorize the DNR to promulgate rules to implement and enforce the proposed Act in accordance with the Administrative Procedures Act.

Liability and Legal Remedies. The bill would prohibit an action brought against the State or the DNR or its agents or employees for the recovery of damages caused by partial or total failure of a dam, or through the operation of a dam, on the grounds that the State, the DNR, or its agents or employees were liable by virtue of the performance of duties required by the proposed Act. With this exception, the bill could not be construed to deprive an owner of any legal remedy to which he or she was entitled under Michigan law.

The bill could not be construed to relieve an owner of a legal duty, obligation, or liability incident to such ownership or operation of a dam or impoundment.

Compliance. The bill specifies that it would not abrogate requirements of any of the following Acts:

- The Inland Lakes and Streams Act.
- The Wetland Protection Act.
- The Inland Lake Level Act.
- The Natural River Act.

- The Soil Erosion and Sedimentation Control Act.
- Public Act 123 of 1929, which regulates the free passage of fish.

FISCAL IMPACT

Senate Bill 242 (S-1) would have both cost and revenue implications for the State.

An additional \$31,000 would be needed for full funding of the program. Current program funding is \$288,000 and 6.8 FTEs, with one position underfunded due to loss of Federal funds.

The increased dam construction fees and \$25 application fee would be expected to generate between \$1,500 and \$3,000 in additional revenue to the State, based on the historical volume of permits issued. Additional revenue also could be received in light of the proposed increase in activities requiring a permit.

Senate Bill 243 would have no fiscal impact on State or local government.

ARGUMENTS

Supporting Argument

Senate Bill 242 would provide for comprehensive regulation of all construction and repair activities related to dams in the State of Michigan. Public Act 184 of 1963, which currently regulates dam construction and would be repealed by Senate Bill 242, is inadequate to protect the public, the State's natural resources, and the dams themselves. Reportedly, there have been 68 dam failures in Michigan since 1980 and many attribute that alarming statistic to inadequate (or even nonexistent) inspection of dams for safety and structural integrity. By requiring specific construction criteria and inspection schedules, the bill would ensure that the building, repair, and operation of dams received adequate oversight to protect the public, natural resources, and private and public property from damage that could be caused by dam failures.

Supporting Argument

By removing counties' authority to permit or prohibit dam construction, Senate Bill 243 would avoid confusion over which public entity had such authority. In addition, Senate Bill

242 specifies that the DNR would have jurisdiction over all dams and impoundments in the State, with the exception of those specifically exempted from DNR regulation by the bill.

Opposing Argument

Senate Bill 242 should address the problems caused by the proliferation of beaver dams in Michigan's rivers and streams. Such dams reportedly ruin some of the State's finest trout streams by causing sediment and silt to build up in waters that the dams hold back. In addition, when beaver dams fail, the flooding can cause extensive damage to surrounding forest lands and nearby roads--one such failure of a 26-foot tall dam in the western Upper Peninsula reportedly washed out a one-quarter mile stretch of road. An adequate and comprehensive legislative proposal to protect against dam failures should not ignore these problems.

Response: The presence of beaver dams and potential damage that could be caused by them is a wildlife issue and does not deserve inclusion in a dam regulatory bill.

Opposing Argument

Senate Bill 242's definition of "dam" should not include an "embankment". This is a broad term that could be interpreted to include roadway embankments, thereby requiring some road construction projects to gain dam construction permits. The bill should specifically exempt such embankments.

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This analysis was prepared by nonpartisan Senate staff for use by the Senate in its deliberations and does not constitute an official statement of legislative intent.