MINUTES

MONTANA SENATE
53rd LEGISLATURE - REGULAR SESSION

COMMITTEE ON NATURAL RESOURCES

Call to Order: By Chair Bianchi, on March 3, 1993, at 3:05 p.m.

ROLL CALL

Members Present:
Sen. Don Bianchi, Chair (D)
Sen. Bob Hockett, Vice Chair (D)
Sen. Sue Bartlett (D)
Sen. Steve Doherty (D)
Sen. Tom Keating (R)
Sen. Ed Kennedy (D)
Sen. Bernie Swift (R)
Sen. Chuck Swysgood (R)
Sen. Henry McClernan (D)
Sen. Larry Tveit (R)
Sen. Cecil Weeding (D)
Sen. Jeff Weldon (D)

Members Excused: Sen. Lorents Grosfield (R)

Members Absent: None.

Staff Present: Paul Sihler, Environmental Quality Council
Leanne Kurtz, Committee Secretary

Please Note: These are summary minutes. Testimony and discussion are paraphrased and condensed.

Committee Business Summary:
Hearing: HB 98, HB 84
Executive Action: None.

HEARING ON HB 98

Opening Statement by Sponsor:

Representative Joe Quilici, HD 71, said in 1978, congress passed the Energy Conservation Policy Act, which initiated the state Residential Conservation Service Program. The federal law was later repealed, so the conservation service program is no longer needed. Rep. Quilici stated HB 98 repeals the laws relating to the residential conservation service.

Proponents' Testimony:

Tom Livers, Department of Natural Resources and Conservation (DNRC) said this issue surfaced in an audit by the legislative auditor in 1991. He said the program accomplished what it was intended to, is no longer funded by the federal government, and is no longer needed.

Opponents' Testimony:

None.

Questions From Committee Members and Responses:

Sen. Weeding asked about the nature of the program. Mr. Livers said in 1978, private utilities became involved in home energy audits and provided low interest loans for home energy conservation.

Mr. Livers stated DNRC's only function in this program was to oversee activities of the utilities, but it was essentially an autonomous program.

Closing by Sponsor:

Rep. Quilici closed.

HEARING ON HB 84

Opening Statement by Sponsor:

Representative Russell Fagg, HD 89, said he served on the Water Policy Committee during the interim. He stated the committee was involved in studying the Dam Safety Act, and came up with 2 bills as a result. Rep. Fagg explained HB 84 defines "dam" and "high hazard dam". He noted HB 84 was amended on the House floor to change "high hazard dam" to "Class 2 dam". Rep. Fagg said Section 3 addresses how a high hazard dam will be determined, Section 5 deals with permitting for construction of high hazard dams, and Section 8 addresses DNRC's authority to enforce compliance with permit specifications. He stated DNRC's dam safety staff would conduct inspections under HB 84, and a dam owner could appeal through district court any determinations made by DNRC.

Proponents' Testimony:

Gary Fritz, DNRC, submitted written testimony (Exhibit #1) and mentioned the Water Policy Committee's report, which was

distributed to Committee members (Exhibit #2). Mr. Fritz said the definition of a dam is changed on p. 2 because the bill gives DNRC authority to inspect a dam under 50 acre feet in size when a complaint is received. He added DNRC currently has authority to investigate complaints for dams over 50 acre feet.

Opponents' Testimony:

None.

Questions From Committee Members and Responses:

Sen. McClernan asked what a Class 1 or Class 3 dam is. Mr. Fritz responded there are no dams characterized Class 1 or Class 3.

Sen. Bianchi asked what Representative Gilbert's intention was when he proposed the amendment to change "high hazard" to "Class 2". Rep. Fagg said Rep. Gilbert thought "high hazard" suggested the dam was unsafe which would make it difficult to sell property downstream.

Proponent's Testimony:

Jo Brunner, Montana Water Resources Association (MWRA) said MWRA asked Rep. Gilbert to introduce amendments changing "high hazard" to "Class 2" because people often think high hazard means unsafe, which, she stressed, is a misinterpretation. Ms. Brunner said the majority of dams classified as high hazard are safely constructed. She added MWRA supports HB 84.

Questions From Committee Members and Responses:

Sen. Weeding asked what is the definition of a Class 2 dam. Laurence Siroky, DNRC, stated the definition of a Class 2 dam is the same as the definition of a high hazard dam. Sen. Weeding asked about the federal nomenclature. Mr. Siroky stated the federal government identifies as "high hazard" dams where there is potential for loss of life downstream.

Sen. Hockett said he noticed inconsistencies in nomenclature among states listed in the dam safety handbook. He asked if more than one classification is needed to address variance in severity of potential problems. Mr. Siroky said that is a policy decision the legislature should make. He added DNRC only regulates high hazard dams, noting dams are separated into 3 different classes:

- high hazard, where loss of life could occur downstream

- significant hazard, where substantial damage could occur downstream, but no loss of life

- low hazard, where little damage would be expected downstream

Sen. McClernan asked if there is language other than "high hazard" which may not have such a negative connotation to a potential purchaser of land. Ms. Brunner said MWRA would have preferred use of "Class 1". Mr. Fritz stated the Water Policy Committee decided to leave the terminology as it is, noting that 8 of the 14 western states and most all federal agencies think the term "high hazard" is appropriate.

Referring to page 8, Section 8 of the bill, Sen. Keating asked what would constitute a violation. Mr. Siroky stated a high hazard dam that is leaking excessively with no way to modify the water level to make it safe would be subject to the penalty delineated in Section 8. Mr. Siroky stated a dam owner would have to fix or remove the dam in a reasonable amount of time, or DNRC will order the dam repaired and file a lien on the property.

Sen. Weeding asked where a potential buyer of property would find a listing of high hazard dams. Mr. Siroky stated high hazard dam owners would be required to have an operative permit by 1995. He added there is a list of high hazard dams at DNRC, and owners are notified that the dams have been classified high hazard.

Representative Fagg said he does not feel strongly one way or another regarding whether dams should be called "Class 2" or "high hazard", but added he thinks there should be a uniform definition to avoid confusion in the future.

Closing by Sponsor:

Rep. Fagg said either name the Committee wishes to use for high hazard dams if fine with him, noting that nomenclature is not the most important aspect of HB 84.

EXECUTIVE ACTION ON HB 98

Motion/Vote:

Sen. McClernan MOVED HB 98 BE CONCURRED IN. The MOTION CARRIED UNANIMOUSLY, with Sen. Swysgood choosing to abstain because he was not present for the discussion.

Announcements/Discussion:

Chair Bianchi named Sen. Doherty (chair), Sen. Weeding, Sen. Swift, and Sen. Tveit to serve on the subcommittee for SB 401.

Chair Bianchi asked Sen. Weeding to carry HB 98 on the Senate floor.

ADJOURNMENT

Adjournment: 3:45 p.m.

Don Bianchi
SEN. DON BIANCHI, Chair

Leanne Kurtz
LEANNE KURTZ, Secretary

DB/lk

ROLL CALL

SENATE COMMITTEE Natural Resources DATE 3/3

NAME	PRESENT	ABSENT	EXCUSED
Sen. Bianchi	✓		
Sen. Hockett	✓		
Sen. Bartlett	✓		
Sen. Doherty	✓	~~✓~~	
Sen. Grosfield			✓
Sen. Keating	✓		
Sen. Kennedy	✓		
Sen. Swift	✓		
Sen. Suvsgood	✓		
Sen. McClernan	✓		
Sen. Treat	✓		
Sen. Weeding	✓		
Sen. Weldon	✓		

FC8

Attach to each day's minutes

TESTIMONY OF THE
DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
ON HOUSE BILL 84, FIRST READING

BEFORE THE SENATE NATURAL RESOURCES COMMITTEE

MARCH 3, 1992

A BILL FOR AN ACT ENTITLED: "AN ACT REVISING THE DAM SAFETY ACT; REVISING THE AUTHORITY OF THE DISTRICT COURT AND COUNTY COMMISSIONERS TO CONSIDER DAM SAFETY COMPLAINTS."

The Department of Natural Resources and Conservation (DNRC) supports the proposed bill. It is the result of a thorough review of Montana's laws and regulations concerning safety of dams by the Legislative Water Policy Committee. In its deliberations, the Water Policy Committee included the participation of DNRC staff.

The bill streamlines the process of addressing concerns regarding the construction or operation of dams and reservoirs that endanger life or property. Presently, the statute provides that complaints by an individual may be pursued through either the Department, County Commissioners, or District Court. Further the Department's authority on dam safety complaints applies to dams that are 50 acre-feet or larger in size. The county commissioner's authority applies to unsafe dams that are under construction. District Court jurisdiction applies to any dam, whether existing or under construction. If House Bill 84 becomes law, this fragmentation would be eliminated with the Department having authority to deal with all dam safety complaints.

During the recent drought years, the Department has investigated one to two complaints per year. At the same time, we are not aware of any complaints filed with the a County Commission or a District Court. As such, the Department expects it could address all future complaints without experiencing increased costs or having to increase staffing levels.

The civil penalty provided in Section 8 serves as both an enforcement tool and an incentive to dam owners to properly operate and maintain their facilities. It would apply to high-hazard dams -- those 50 acre-feet in size or larger and having the potential to cause loss of life if failure should occur -- as well as those impounding 50 acre-feet or more where a complaint is involved. The existing penalty of restricting the operation of a reservoir is not always possible since runoff and subsequent reservoir storage cannot be physically controlled. Therefore, the additional enforcement capability of a civil penalty is needed.

The Department supports the amendment to Section 6, paragraph B, which provides that the Department must have substantive evidence and reason to require inspections more often than once every five years. This change basically reflects the

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EXHIBIT NO. 1
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current practice of the Department wherein the condition of a high hazard dam, usually as indicated by an inspection report, serves as the basis for establishing the time period between inspections made by qualified engineers. Using this approach, the frequency of such inspections for the nineteen high hazard dams permitted by the state have been set for time intervals ranging from three to five years. This is generally consistent with the norm for other states having dam safety laws wherein the required interval between inspections by qualified engineers averages three years. It might also be noted that, along with requiring the periodic engineer's inspections, Montana's regulations also call for annual inspections by the owner.

In summary, the Department supports the statutory changes provided by this legislation. These changes represent practical adjustments to the Dam Safety Act that has been in effect since 1985.

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EXHIBIT NO. 2
DATE 3/3/93
BILL NO. HB 84

Section 1. – Dam Safety Study

Introduction

Senate Bill 313, derived from the Water Storage subsection of the 1991 State Water Plan, directed the Water Policy Committee, with the cooperation of the Department of Natural Resources and Conservation (DNRC), to conduct a study of the Montana Dam Safety Act and implementing regulations to determine:

(a) the acceptable degree of risk to public safety and appropriate allocation of responsibility for that risk between the public, government, and dam owners;

(b) whether the definition of a high-hazard dam should be modified;

(c) whether the high-hazard classification should be expanded into a risk scale that allows structural design requirements to reflect probable risk to life and property; and

(d) whether the DNRC should be given greater discretion to substitute alternative means of addressing risks, such as early warning systems, for structural design requirements.

The Committee understood the importance of this study dealing with the potential loss of human life and devoted a substantial amount of time and energy to bring it to a successful conclusion. The Committee heard exhaustive reports from Committee and DNRC staff regarding the specific issues involved before formulating the following recommendations. Additionally, the Committee believed that the public should play an important role in this study. The Committee developed a mailing list including almost 150 dam owners, Disaster and Emergency Services personnel, and engineers involved in the design, construction and maintenance of dams in Montana. Throughout this study, individuals on this list were notified of every meeting, ensuing Committee discussion, draft and final recommendations and a specially advertised public hearing.

What follows is a brief review of the Committee study and final recommendations. For more details on the issues or the study itself, please contact Committee staff.

SB 313 ISSUE (A). THE COMMITTEE SHALL DETERMINE THE ACCEPTABLE DEGREE OF RISK TO PUBLIC SAFETY AND APPROPRIATE ALLOCATION OF RESPONSIBILITY FOR THAT RISK BETWEEN THE PUBLIC, GOVERNMENT, AND DAM OWNERS.

Issue Background

The Montana Dam Safety Act requires that, by July 1, 1995, existing high-hazard dams must obtain a permit from the DNRC verifying that the dams satisfy safety standards.

To date, studies have been completed on approximately 33 of 85 high-hazard reservoirs to determine the modifications needed to satisfy the standards. The cost of rehabilitating state-owned high-hazard dams is expected to exceed $200 million.

The public policy questions the Committee is being asked to answer for the state are "What degree of risk is acceptable", and "Who should assume it?" There is a tradeoff to be made between the cost of building or rehabilitating a dam on the one hand, and the risk to public safety on the other. If the risk to public safety is increased -- for example by allowing a lower minimum spillway capacity -- the cost of reservoir construction and rehabilitation is decreased. Conversely, increased safety (less risk to the public), increases costs. The Committee is being asked, during the next interim, to decide where the balance is between cost and safety.

Sub-Issues Identified for In-depth Analysis

Issue 1. Liability - Current Montana statutes and court case law impose the negligence liability standard for permitted dam owners. Is this appropriate?

Committee Action Summary

The Committee addressed risk allocation, to some degree, with every dam safety issue. For example, when considering the existing loss of one life standard under Issue 5, the Committee decided that it wished not to change the current standard to something greater than the loss of one life. That kept most of the risk burden on the dam owner. Had the Committee decided that the proper loss of life standard should be greater than one life, it would have shifted some of the risk burden to the general public.

But apart from this indirect method of addressing risk allocation, this issue was addressed directly by looking at dam owner liability. For example, requiring a downstream individual, injured through a dam failure, to prove that a dam owner was negligent before collecting damages shifts some of the risk burden to the general public and away from the dam owner. Conversely, holding a dam owner strictly liable for any damage resulting from dam failure, regardless of negligence, places the maximum risk burden on the dam owner. Current Montana statutes and court case law impose the negligence liability standard for permitted dam owners. The Committee was being asked under SB 313 if that standard was appropriate.

The Committee heard presentations regarding liability standards in Montana and other states. It also received much testimony, written and oral, from the public on this issue. One subject that was fully discussed involved the issue of *encroachment.*

The Committee found that the current negligence standard was appropriate for properly constructed dams, but it also believed that an even higher test should have to be met before an injured party can sue a dam owner if the injured party placed a structure downstream of, in other words - encroached upon, an existing dam.

The risks inherent in placing a structure downstream of an existing dam should be born by both the dam owner and the downstream landowner.

Another sub-issue discussed by the committee regarded the current fragmented approach to dam safety complaints. Current law allows an individual to approach the district court or the county commissioners with a complaint involving the construction of a dam. The court or the county commissioners must then appoint a three person dam safety panel to determine if the complaint is valid. The Committee believes that the process should be consolidated within the DNRC to ensure accurate and efficient dam safety complaint response and to reduce the potential for dam owner harassment. An individual who disagrees with the DNRC determination, or an individual actually injured through dam failure, would retain the right to file an action in district court.

Final Recommendation

The Committee will sponsor legislation that:

(a) requires a landowner who places a structure downstream of an existing dam to prove that the dam owner was grossly negligent before the dam owner can be found liable for damages;

(b) extends the gross negligence standard established in (a) to those non-high-hazard dams designed, constructed, and maintained under the supervision of a qualified engineer; and

(c) removes the county commissioners and district court from the initial dam construction safety complaint process.

Draft legislation implementing this recommendation is attached as Appendix 1.

Issue 2. High-Hazard Dam Insurance - Apparently, few high-hazard dam owners in Montana have insurance for their dams. Is this a problem, and if so, what is the appropriate state response?

Committee Action Summary

The issue of high-hazard dam insurance arose mid-way through the study after the public hearing in May, 1992. The dam owners who testified stated that dam insurance was difficult to find and almost always too expensive to purchase.

The Committee sent a questionnaire to all the high-hazard dam owners in Montana and discovered that most did not have insurance but that most would probably purchase insurance if they could find it at a reasonable cost. The potential costs and benefits of a mandatory insurance requirement or a state subsidized dam insurance program where briefly discussed. The Committee expressed little support for either option due to the fiscal burdens the programs would impose on the state or the dam owners.

Final Recommendation

The Committee, while it believes adequate dam insurance to be in the best interests of the dam owner and the citizens of Montana, will not recommend mandatory dam insurance or a state subsidized insurance program. However, the Committee will continue to work with the private insurance industry to determine the feasibility of providing reasonable high-hazard dam insurance.

SB 313 ISSUE (B). THE COMMITTEE SHALL DETERMINE WHETHER THE DEFINITION OF A HIGH-HAZARD DAM SHOULD BE MODIFIED.

Issue Background

The Montana Dam Safety Act presently defines a high-hazard dam as any reservoir retaining 50 acre-feet (ac/ft) or more of water that, if it fails, would likely cause a loss of life. Classification as high-hazard does not imply nor determine whether or not the dam is structurally sound. The Committee is being asked to decide if the existing definition is adequate, or if it should be modified.

Sub-Issues Identified for In-depth Analysis

The Committee identified two categories of sub-issues under this topic -- those dealing only with the term *high-hazard* itself, Issue 3, and those dealing with the technical classification of a dam as high-hazard, Issues 4 through 10.

Issue 3. High-Hazard Nomenclature - The term "high-hazard" is sometimes misunderstood to mean unsafe. Should permitted dams be called something other than "high-hazard"?

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Committee Action Summary

The Committee again heard much public testimony regarding this issue. As evidenced by the public comment summary, Appendix 2, there is widespread misunderstanding of the term "high-hazard" among the general public. For this reason, most dam owners want the term changed. The Committee, however, was concerned by the lack of consistency among states and federal agencies that regulate dams. Of the 14 western states, eight use the term high-hazard, two use Class 1, 2, or 3, and four regulate all dams and therefore do not differentiate between high-hazard and other types of dams. Federal agencies use Class A, B, or C, or the term high-hazard. The Committee also expressed concern that by changing the name high-hazard to something less alarming it may remove an effective mechanism for putting downstream landowners on notice that there was a potentially life-threatening dam upstream.

Final Recommendation

The Committee will not recommend a change in nomenclature at this time. However, the Committee remains concerned by persistent public misunderstanding of the term "high-hazard" as equaling "structurally unsound". The Committee recommends that the DNRC continue working with other states and federal agencies to develop a uniform high-hazard dam nomenclature and that the DNRC should continue to review this issue as it amends its dam safety rules in the future.

Issue 4. Dam Regulatory Capacity - Montana currently regulates dams that contain 50 ac/ft of water or more. Should this standard be changed?

Committee Action Summary

By modifying the 50 ac/ft definitional standard and or adopting a minimum dam height requirement, Montana could change the number of dams that it regulates. Raising the ac/ft limit to, for example, 100 ac/ft would eliminate the need for state operating permits for dams under that limit. While this may stimulate the construction of dams in Montana, this modification could have an impact on the safe operation of these dams and place additional people at risk from a dam failure.

Final Recommendation

The Committee believes that the 50 ac/ft standard is appropriate and that the addition of a minimum height requirement would not add to the effectiveness of the state dam safety program, therefore, the Committee recommended no change in the current standard.

Issue 5. Loss of One Life Standard - Montana currently regulates dams that could cause the loss of one life if they failed. Should this standard be changed?

Committee Action Summary

The DNRC told the Committee that changing the current "high-hazard" loss of one life standard to mean the loss of a few lives would not reduce the number of dams that the state regulates. Currently, a "high-hazard" dam failure in Montana would involve the likely loss of a few lives. While changing the loss of life standard could stimulate the construction of dams in Montana, it also could affect the safe operation of those dams and place additional people at risk from a dam failure.

Final Recommendation

The Committee believes that "loss of one life" is the proper standard for the state dam safety program and therefore recommends no change in the current standard. The Committee understands that this is more restrictive than some federal regulations.

Issue 6. Dam Owner Not Included in Loss of Life Calculation - Montana does not exempt the dam owner or the owner's family from the loss of life standard. Is this appropriate?

Committee Action Summary

Again, the DNRC told the Committee that by exempting the dam owner and or the owner's family from the loss of life standard, the state would not significantly reduce the number of dams it regulates. The DNRC has classified only one dam "high-hazard" due to the presence of the owner and or the owner's family alone. While exempting the dam owner and or the owner's family again could stimulate the construction of dams in Montana, it could affect the safe operation of those dams and place additional people at risk from a dam failure. The Committee believes that "loss of one life", including the dam owner and the owner's family, is the proper standard for the state dam safety program. The Committee understands that this is more restrictive than some federal regulations.

Final Recommendation

The Committee considered public comments that supported removing the dam owner and the dam owner's family from the loss of life calculation but determined the current standard is appropriate.

Issue 7. Initial Reservoir Condition - When determining the flooded area in a dam failure calculation the DNRC assumes the water level is at the crest of the emergency spillway. Is this assumption appropriate?

Committee Action Summary

Determining whether a dam failure would cause the loss of a life requires the DNRC to determine the flooded area due to that dam failure. To determine the flooded area, the DNRC must assume an initial reservoir water level. DNRC rules state that the water level assumed for the dam failure calculation will be at the crest of the emergency spillway. This assumption is the least likely to indicate a potential loss of life. Raising the initial water level assumption to something higher than the crest of the emergency spillway would probably indicate a greater likelihood of loss of life and could classify more dams as "high-hazard" in Montana.

Final Recommendation

The Committee believes that the current state administrative rules utilizing the crest of the emergency spillway initial water level is appropriate for the state dam safety program. This standard, when considered with the other DNRC standards, represents an appropriate balance between cost of dam construction and public safety.

Issue 8. Clear Weather Failure Mode - Again, when determining the flooded area in a dam failure calculation, the DNRC also assumes that there are no flood flows occurring upstream of the dam. Is this assumption appropriate?

Committee Action Summary

Montana currently uses the "clear weather failure mode" in determining the flooded area in a dam failure calculation. In other words, the DNRC assumes that there are no flood flows occurring upstream of the dam when determining the extent of downstream inundation resulting from a dam failure. This assumption apparently will predict a greater probability of loss of life than other available assumptions.

By using a different assumption, one less likely to indicate a probable loss of life, the state could regulate fewer dams. Changing the failure mode assumption in this fashion could stimulate the construction of dams in Montana. However, it could also affect the safe operation of those dams and place additional people at risk from a dam failure.

Final Recommendation

The Committee believes that the current state administrative rules utilizing the "clear weather failure mode" is appropriate for the state dam safety program. Again, this standard, when considered with the other DNRC standards, represents an appropriate balance between cost of dam construction and public safety.

Issue 9. Definition of "Structures" - The DNRC assumes that a loss of life would occur if any of the following "structures" are present or planned in a breach flooded area: occupied houses and farm buildings, stores, gas stations, parks, golf courses, stadiums, ball parks, interstate, principal and other paved highways, railroads, highway rest areas, RV areas, and developed campgrounds. Should the definition of "structures" be changed?

Committee Action Summary

By removing some of the above listed "structures" from the rules, the state could regulate fewer dams. While this could stimulate the construction of dams in Montana it could affect the safe operation of those dams and place additional people at risk from a dam failure.

Final Recommendation

The Committee recognizes that some concern exists over what structures should be included in the loss of life standard calculation, but in the absence of a persuasive argument to remove any specific "structure" from the list, the Committee, after much debate, did not recommend any changes in the definition of "structure".

Issue 10. Flooded Depth Calculations - Current DNRC policy does not attempt to estimate a specific flood depth for a specific site during its breach flooded area calculations. Is this appropriate?

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Committee Action Summary

The DNRC justified its current policy by stating that its best estimate for a specific flood depth is variable by a few feet. Factors such as erosion, flood debris, and vegetation cannot be precisely quantified for a greater degree of accuracy. If the DNRC were to change its policy and assume, for instance, that a flood depth of less than two feet would not cause a loss of life, the breach flooded area would be reduced. This could reduce the number of dams that the state regulates. While this could stimulate the construction of dams in Montana it could affect the safe operation of those dams and place additional people at risk from a dam failure.

The Committee believes that a flood depth of a minimum level should not impede the construction of storage facilities in the state. However, the Committee understands that it is difficult for the DNRC to determine with a great degree of accuracy what the exact flood depth at a specific site in a dam failure situation would be. The Committee decided to err on the side of increased public safety and recommend no change to the current standard.

Final Recommendation

The Committee believed that due to the difficulty in accurately estimating flood depth, and recognizing that DNRC currently has discretion in using the breach flooded area calculation to classify high-hazard dams, the current standard is appropriate.

SB 313 ISSUE (C). THE COMMITTEE SHALL DETERMINE WHETHER THE HIGH-HAZARD CLASSIFICATION SHOULD BE EXPANDED INTO A RISK SCALE THAT ALLOWS STRUCTURAL DESIGN REQUIREMENTS TO REFLECT PROBABLE RISK TO LIFE AND PROPERTY.

Issue Background

Do all high-hazard dams present the same risk to public safety and loss of property? Should a large dam immediately above a city be treated differently than a small dam some miles above a campground? The present system of classifying high-hazard dams does not evaluate the relative level of risk associated with a given reservoir. The Committee is being asked to decide whether the classification system should be expanded to include a "risk scale," and if so, what factors should be considered is assigning relative levels of risk.

Sub-Issues Identified for In-depth Analysis

Issue 11. Statutory Risk Assessment - Currently the DNRC is not allowed to consider the probable risk to life and property in setting design standards for high-hazard dams. In other words, a high-hazard dam overlooking a highway is regulated the same as a high-hazard dam overlooking a subdivision. Is this appropriate?

Committee Action Summary

The Committee wanted to ensure that the DNRC dam safety standards are clear and easy to understand and apply for engineers and dam owners. The Committee believes that that is the current situation. The Committee discussed the potential for legislatively mandating dam safety standards or a risk scale but determined that the current amount of DNRC discretion on this issue was appropriate.

Final Recommendation

The Committee determined that, considering the discretion currently granted to the DNRC, the standard is appropriate.

Issue 12. Risk Scales in DNRC Regulations (a) Spillway Standards - Are the current spillway standards, set in DNRC rules, a reasonable balance between cost of construction and risk of dam failure?

Committee Action Summary

Since the actual dam standards are not set in the Dam Safety Act, they were set by the DNRC through administrative rule. The establishment of the standards is in itself a balancing of cost and risk. Minimum standards that are too low present increased risk to the public, while minimum standards that are too high can greatly increase costs to the dam owner. The Committee was being asked if the risk scale established as a result of the DNRC dam safety rules is a reasonable balance between cost and risk.

Final Recommendation

The Committee generally believes that current DNRC rules are an appropriate balance between cost and risk. The Committee was interested in allowing the DNRC director more flexibility to waive certain standards under the appropriate circumstances, but decided that, considering the current level of DNRC discretion, they would recommend no changes in the current standards.

Issue 13. Risk Scales in DNRC Regulations (b) Spillway Requirements and Warning Time - Montana allows smaller spillways for dams where the nearest community contains less than 20 residents and is more than 4 hours away? Is this appropriate?

Committee Action Summary

Montana regulations allow for smaller spillways if there are less than 20 residents downstream and the first residence is more than 4 hours of breach travel time away. Again, the Committee was being asked if the balance between cost and risk is appropriate.

The Committee again felt that the DNRC had achieved an appropriate balance. The issue of spillways in general received much Committee attention. Current DNRC policy will allow a minimally substandard spillway to remain until the dam owner begins other needed dam repairs. The Committee was concerned that this policy may unintentionally discourage dam owners from doing needed repairs on their dams for fear of triggering stricter spillway standards. Also, the Committee was interested in allowing the DNRC to accept existing minimally substandard spillways on otherwise sound dams. The DNRC told the Committee that they currently exercised a certain amount of discretion in identifying substandard spillways and that they had the authority to require a dam owner to begin needed repairs if the dam was a threat to public safety.

Final Recommendation

The Committee determined the current standard is appropriate.

Issue 14. Risk Scales in DNRC Regulations (c) Instrumentation - Currently, instrumentation requirements vary for different dams depending on the size and condition of the dam. Is this appropriate?

Committee Action Summary

The Committee generally believes that the method of determining instrumentation requirements is appropriate. The Committee did discuss leaving instrumentation requirements to the discretion of the engineer, especially for dams less than 100 feet in height, but decided not to pursue this option.

Final Recommendation

The Committee determined the current standard is appropriate.

Issue 15. Risk Scales in DNRC Regulations (d) Construction Standards - Montana uses current federal construction standards, except for spillway standards, for new dam construction. Is this appropriate?

Committee Action Summary

Again, the Committee discussed increasing the engineer's discretion in setting construction standards but they generally believed that the current standards are appropriate.

Final Recommendation

The Committee determined the current standards are appropriate.

Issue 16. Risk Scales in DNRC Regulations (e) Dam Inspections, Frequency - Montana requires a high-hazard dam to be inspected at least every five years. The DNRC may require more frequent dam inspections for certain dams depending on dam condition or location. Is this appropriate?

Committee Action Summary

The Committee strongly felt that the once every five year minimum inspection period was appropriate.

Final Recommendation

The Committee found that the current inspection standards are appropriate. However, the Committee was concerned by the apparent inability of the DNRC to enforce the inspection requirements, therefore, the Committee will recommend amending existing law authorizing the DNRC to impose a penalty for Dam Safety Act non-compliance.

Draft legislation implementing this recommendation is attached as Appendix 1.

Issue 17. Risk Scales in DNRC Regulations (f) State Provided Dam Inspections - Complaints have been received regarding the cost of required dam inspections. The DNRC is not currently authorized to provide inspections for non-state owned dams. In order to provide lower cost inspections to dam owners, should Montana allow DNRC personnel to inspect high-hazard dams?

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Committee Action Summary

The Committee, in response to public testimony, was concerned that many dam owners in Montana could not get a private engineer at a reasonable cost to perform the inspections. However, the Committee determined that the options available for addressing the problem created other substantial problems for the state involving cost, liability, and interference with the private engineer market.

Final Recommendation

Due to concerns regarding state inspection program funding and state liability issues, the Committee will not recommend any changes to the current DNRC inspection policy.

Issue 18. Risk Scales in DNRC Regulations (g) Dam Inspections, Extent - The extent of dam inspections currently varies depending on dam condition or location. Is this appropriate?

Committee Action Summary

The condition of a dam or the downstream hazard determine the extent of the DNRC required periodic inspection. In other words, dams that are in good condition do not require as extensive an inspection as dams in poor condition. The extent of the periodic inspection is reviewed by the DNRC. Is this variation in the extent of the dam inspection appropriate?

The Committee felt strongly that the current DNRC dam inspection policy is appropriate.

Final Recommendation

The Committee determined the current standard is appropriate.

SB 313 ISSUE (D). THE COMMITTEE SHALL DETERMINE WHETHER THE DNRC SHOULD BE GIVEN GREATER DISCRETION TO SUBSTITUTE ALTERNATIVE MEANS OF ADDRESSING RISKS, SUCH AS EARLY WARNING SYSTEMS, FOR STRUCTURAL DESIGN REQUIREMENTS.

Issue Background

This is fairly self-explanatory: The Committee is being asked to decide whether there are other acceptable means of addressing risk, presumably that are less expensive, than stringent structural design requirements.

Sub-Issues Identified for In-depth Analysis

Issue 19. Other Risk Assessment Considerations, DNRC Scoring Process - Should the DNRC develop a dam "scoring" process to determine what hazard class, or what design standards, should apply to a particular dam?

Committee Action Summary

The Committee was interested in developing a scoring process including dam soundness and potential threat to life or property but members were concerned that the process could become too subjective. The Committee encouraged the DNRC to continue to evaluate the potential for developing a dam safety scoring process.

Final Recommendations

The Committee decided that it would make no recommendations regarding Issue 19.

Issue 20. Other Risk Assessment Considerations, Probabilistic Approach - Should the DNRC establish a probability number for dam failure?

Committee Action Summary

The Committee believed that establishing a probabilistic approach to dam failure calculations may be more meaningful than using the current potential maximum flood approach. The Committee encouraged the DNRC to continue working with other states and federal agencies in evaluating this approach.

Final Recommendations

The Committee decided that it would make no recommendations regarding Issue 20.

DATE 3/5

SENATE COMMITTEE ON NATURAL RESOURCES

BILLS BEING HEARD TODAY: HB 84, HB 98

Name	Representing	Bill No.	Check One Support	Oppose
GARY FRITZ	DNRC	HB84	X	
LAWRENCE SIEBERT	DNRC	HB84	X	
TOM LIVERS	DNRC	HB98	X	
JO BRUNNER	MWRA	HB84	X	

VISITOR REGISTER

PLEASE LEAVE PREPARED STATEMENT WITH COMMITTEE SECRETARY

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